THE MARINE RECORD.

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LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interest of Lake Carriers, and im rove the character of the service rendered to the public.

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DECREASE IN LAKE FREIGHTS.

Gen. O. M. Poe, U. S. Engineer Corps, in charge of the Northwestern river and harbor improvements, has lately compiled a table of freight rates on the lakes from 1887 to 1894 inclusive. It is not stated, but they are presumaby the average rates for the season on freights passing through the St. Mary's Falls Canal to and from Lake Superior. His table shows that all freights, with the single exception of building stone, have decreased at a big ratio since the first named season. In all but three or four cases the decrease has been over 50 per cent, and in one or two has been 75 to 80 per cent. Wheat, for instance, dropped from 7 cents in 1887 to 2½ cents in 1894, and iron ore from $1.75 to 70 cents. Lumber rates have gone down almost steadily. Last year they were less than half as great as in 1887, and this year are still lower. The rates given by Gen. Poe are as follows: 1887, $4.00 per thousand feet; 1888, $2.80; 1889, $2.70; 1890, $2.38; 1891, $2.70; 1892, $2.95; 1893, $2.35; 1894, $1.90. This year the rate is $1.62½, a drop of 27½ cents from the rate given for last year. It will be seen that from 1887 to 1888 there was a very great decrease in the rate, which went down from $4.20 to $2.80. There was not much change the next year, the drop being only cents, with but a moderate falling in 1890, as it seems looking back from to-day, though at that time it must have been considered very large. Then rates went back until in 1892, the year of great business in every line, the highest rates since 1887 were paid. Since then the course has again been down, until this year they are 45 per cent below the rates of 1892, and only a little more than one-third those of 1887. It would seem that at present there must be a stop to the decline, and that any change that will come must be an advance, for the rates are where there can be little further decrease without forcing vessels to run at a great loss, and they will not do that for any longer period.

MICHIGAN'S TAX LAW.

Michigan's taxation law, as amended by the Waldo bill, which has just passed the legislature. The bill amended Section 11 of Act 206 of the Public Acts of 1896. The text of the change is as follows:

"Provided, further, that all the personal property of all corporations heretoforeor or hereinafter organized under the laws of this State for the purpose of engaging in maritime commerce or navigation, shall be assessed only in the city, village, or township which is stated in their original articles of associations or in any amendment thereof, heretofore or hereafter made, to be the location of their general office or business."

This law will put an end to much controversy which has existed in Michigan, and will without doubt be warmly approved by the vessel interests.

NOTICE TO MARINERS.

Light-House Establishment,
Office of the Light-House Inspector, Ninth District,
CHICAGO, Ill., June 10th, 1895.

Notice is hereby given that the 3rd class can buoy marking Hyde Park Shoal (outside) and the spar buoy marking Morgan's Reef (outside), are reported out of position, and the 2nd class can buoy marking South Park Shoal is reported as adrift. All off South Chicago, Ill.

The buoys will be replaced and reset at an early date.

By order of the Light House Board.

COMMANDER J. H. DAYTON, U. S. N.,
Inspector 9th Light House District.

JAPANESE LAUNCHINGS.

The Japanese apply one of their many "pretty ways" to the launching of ships. They use no wine. They hang over the ship's prow a large pasteboard cage full of birds, and the moment the ship is afloat a man pulls a string, the cage opens, and the birds fly away, making the air alive with music and the whir of wings. The idea is that the brids welcome the ship as she begins her career as a thing of life.

ELIGIBLE FOR LICENCES.

The supervising inspector general of steamboats has advised supervising and local inspectors of steam vessels to the effect that the attorney-general of the United States having rendered an opinion, declaring the provisions of the act of congress known as the "Dingley bill," as not inconsistent with the provisions of the act of congress authorizing the licensing of certain aliens as engineers and pilots of steam vessels, and that the latter act is still in force, thereby reversing the views previously held by the department, requiring that licensed officers of steam vessels must be American citizens, the provisions of said circular are hereby repealed. Inspectors will hereafter be governed by the provisions of the old act, which provides that any alien who, in the manner provided for by law, has declared his intention to become a citizen of the United States, and who shall have been a permanent resident of the United States for at least six months immediately prior to the granting of such license, may be licensed, as if already naturalized, to serve as an engineer or pilot upon any steam vessel subject to inspection.

ON LAKE LEVELS.

Mr. P. McCann of St. Ignace, Mich., has a theory regarding lake levels and in answer to the question, "why if the level in Detroit River, St. Clair River, Lake St. Clair and Lake Huron is lowered by the deep channel at the mouth of the river, does not the levels in Lake Erie and all of its harbors show a corresponding increase?" propounds as follows:

Mr. McCann says there are two causes for the lowering of the water levels of Lake Erie. First, after the channels at the Flats and Limekiln crossing were deepened, the outflow of water from Lakes Huron and Michigan and into Lake Erie was increased pretty nearly one-third. This increased outflow raised the level of Lake Erie and kept up a high level there until the level of Lake Huron and Lake Michigan began to subside. During the time of the high levels of Lake Erie the pressure of the water running down the Niagara River had materially increased in force and velocity thereby, wearing away the banks of the river, leaving a wider space for the water of the lake to flow through than existed before that time. When the supply of water from Lake Huron began to diminish on account of the lowering of its level, the widened and enlarged channelof the Niagara River began to draw on Lake Erie for the extra supply of water to keep the channel running full, and consequently Lake Erie has fallen below its normal level.

The other reason is the well-known one that when so much of the land that composes the watershed of Lake Erie is put under cultivation, the evaporation is so great that half the rainfall is carried back to the clouds by it, which would decrease the inflow from the rivers so much that the lake levels would be effected by it. In my opinion these are the reasons for the lowering of the levels of Lake Erie.

REMOVAL OF WRECK.

The Deputy Minister of Marine and Fisheries, Ottawa, Canada, asks for bids for the removal of the wreck of the barge Ark, now lying in the channel of Detroit River, near Amherstburg. Tenders will be received up to the 24th inst, and should be addressed to the Deputy Minister, Department of Marine and Fisheries, Ottawa.

NEWS AROUND THE LAKES.

CHICAGO, ILL.

Special Correspondence to The Marine Record.

Fishermen claim to have found the wreck of the tug Crowell, which foundered off Chicago in the fall of 1893.

The steel steamer Alva arrived at South Chicago on Friday, and went into the Chicago Shipbuilding Co.'s dry dock for repairs.

The Chicora searching party ran across the wreck of the old Orient steamer Havana last week. The Havana was lost eight years ago.

The sum of $200,000 for which the London Lloyds have libeled the Hurd is thought to be about the full amount of the risk carried on the Cayuga.

The City of Berlin was fined $20 last week for reporting her arrival three days late when she came in Dec. 8, last year. The fine will probably be remitted.

The fine twin screw steel steamship Northwest was in Chicago three days last week, and was visited by an admiring crowd numbering some 10,000 persons. She left for Duluth Friday afternoon.

J. H. Almendinger, of Benton Harbor has been awarded a contract to build a lighter, with derrick, winches, and tackle, for the lighthouse supply depot at St. Joseph. His bid was $800.

Insurance losses up to May 1 aggregate $836,373, as compared with $203,789 for the same period last year, and $1,100,000 for the season of 1894. Rates will undoubtedly be stiffer next season particularly on metal boats.

At the shipyards here the schooner John Kelderhouse was on dock for some re-calking; the schooner Guide for a new stern, and some other repairs; the tug Charmer for repairs to her stern bearing the steamer City of Charlevoix for a new wheel; the schooner Cape Horn to have leaks stopped.

J. G. Keith & Co. chartered the steamer Pentland for wheat to Toledo at 1½ cents; the steamer Marion for corn to Kingston at 2⅝ cents; the steamer Ktttie M. Forbes for corn to Buffalo at 1¼ cents; the steamer J. C. Pringle and consorts Sweetheart and B. Harrison for wheat to Toledo at 1½ cents.

The schooner Ada Medora left South Chicago last week with a cargo of steel rails for Owen Sound, Ont, Canada. The rails were shipped by the Illinois Steel Company, and consigned to the Canadian Pacific Railroad Company. It was the first cargo of steel rails ever shipped from Chicago to a foreign port.

Capt. John Prindiville chartered the steamer C. H. Green for corn and oats to Port Huron at 1⅛ cents; the schooner Our Son for corn to Port Huron at 1⅛ cents; schooner Gend for clipped oats to Port Huron at 1 cent; steamer Norwalk, wheat to Toledo 1½ cents; steamer A. Weston and consorts Eleanor and Jeanette, for wheat to Toledo at 1½ cents.

The L. M. & L. S. Transportation Co.'s fine steel steamship Manitou, will commence running for the summer season on Saturday, June 22nd, leaving Chicago at 9 a. m. for Harbor Springs, Petoskey, Charlevoix and Mackinaw Island. She will make tri-weekly trips. The Manitou has received new boilers and is being fitted out for her season's work.

The whaleback steel steamer Christopher Columbus is being fitted out and put in excellent condition for her season's work. She will make daily trips between Chicago and Milwaukee, leaving at 9 a. m. daily from the L. M. & L. S. Transportation Co.'s dock, north side of Rush Street Bridge. She will commence running on Saturday morning, June 22nd.

The Goodrich Transportation Co.'s fine twin-screw steel steamer Virginia arrived here Saturday from Manitowoc where she had received considerable alterations and improvements for her coming season's work. She left here for Milwaukee Sunday morning, and returned the same night on her first round trip this season. She had on board about 600 passengers. She leaves Chicago at 9 p. m. daily for Milwaukee, and returns to this port at 10 p. m. every night.

The Graham & Morton Transportation Co.'s fine side-wheel steamer City of Chicago, commenced running on her regular morning trips on Tuesday, leaving Chicago at 9:30 a. m. daily for St. Joseph and Benton Harbor. The company's new steamer, City of Louisville, arrived here Tuesday evening from Benton Harbor, and left at 11:30 the same night. She will run in connection with the City of Chicago, so that passengers can, during the remainder of the season make daily return trips between Chicago and St. Joseph and Benton Harbor.

DETROIT, MICH.

Special Correspondence to The Marine Record.

The R. Martini is getting general repairs at the Oades marine railway.

The George Spencer got a new wheel at the upper dock late last week.

The E. C. Pope has three new blades put on her wheel at the Detroit dock.

The G. W. Johnson had repairs made to her machinery at the Riverside this week.

Repairs on the steamyacht Sultana were completed at Oades' shipyard on Monday.

The steamyacht Wanda is in Clark's dock for a general overhauling. She is owned by Oren Scotten.

The steamer T. W. Snook has gone to resuming the work of recovering the steel billets from the schooner A. Bradley.

The steamer Jack is receiving temporary repairs at the Detroit dry dock. The appraisers put a value on her of only $8,000 in her present shape. The libel against her is for over $164,000.

The funeral services of Engineer Thompson W. Robinson, who was drowned off the Unique a few weeks ago, were held at his late home last Wednesday afternoon. The M. E. B. A, of Detroit, attended in a body.

The big steamer Maryland is in the Detroit dry dock for repairs to damages received last September, when she grazed the rocks at Ballard's Reef. She requires six new plates and ten broken frames must be replaced.

Lieut. Landry, of the United States navy, will superintend the building of six surf boats of the Monomy pattern by the Wyandotte Boat Co. They are of the same type as the new boats now in use. The contract price is $268.50 each, and they are to be completed Sept. 30.

There is some controversy over the application of the rules of the White bill in Detroit River, many of the most frequented parts of which are in Canadian waters, where these rules are not in force. Efforts have been made to induce the Canadian parliament to enact a law incorporating the same rules, but this has not yet been accomplished.

The directors of the Detroit Dry Dock Co. are considering the problem of enlarging their dock to a length over all of 430 feet. The extension will have to be made toward the river, but the ground is so treacherous that the expense of an extension will without doubt be very heavy. It is stated that nothing has yet been definitely decided upon.

The Canadian steamer Jack, which sank the Norman, was found in American waters the other day long enough to libel her for $164,000 on behalf of the underwriters of the Norman. The Jack will, of course, be liable for only her present value, which, in her present condition, is estimated at about $8,000. She is owned by Calvin, of Kingston. The Jack was patched up at Alpena with temporary bulkheads.

The Canadian collector of customs assessed the tug Grace Ruelle, which the Petrel caught dumping garbage in alleged Canadian waters, $600, which will be divided between the tug and dump scow. The steel buckets are being held until the Petrel is paid $100 for taking them to Lake Erie and dumping them. John W. Lucas, the dumper, was given two fines of $50 and $8 48 costs each for two separate offenses. The others of the crew are fined $50 and $13 costs, or 14 days' hard labor.

BUFFALO, N. Y.

Special Correspondence to The Marine Record.

The Kate Buttironi's cargo of glucose was forwarded to New York by canal.

The canal rate on merchandise from New York to Buffalo is now 50 cents per ton.

The Shenandoah brought down 140,000 bushels of oats last week on 13 feet 10 inches draft.

A culvert washout Wednesday night caused a break in the Erie Canal which required several days to repair.

The schooner Alice Richards had a leak stopped at Mills' dry dock last week. The tug Alpha was in for a general overhauling.

The floating wreck located off Dunkirk, and thought to be the Dean Richmond, is said to be merely a lone spar, held by its rigging.

The Chemung will not get out of dry dock for another week. The current estimate of $13,000 as her repair bill is considerably short of the real figure.

J. J. McWilliams has retired from the coal firm of Hedstrom & McWilliams. The fueling dispute is not heard of any more along the creek.

Harbor-master Soper is enforcing the whistling ordinance and excursion boats now make their bells do duty in warning passengers of leaving time.

Capt. James W. Murray, a lake navigator of 40 years ago, who formerly commanded the Storm King and Metropolis, spent several days in Buffalo last week.

President John D. Arters, of the Casco Bay Steamboat Co., Portland, Me., has secured an option for a 100 days' charter of the steamer El Dorado, beginning June 15, with privilege of purchase.

James B. Donelly, at $165,138 is the lowest bidder for furnishing materials, labor, and appliances for removing solid matter from the movable dam and from the 800-foot approaches to the new Sault Canal locks.

Hand & Johnson's new tug Cascade will be in commission by next Saturday. Their tug W. I. Babcock is being fitted with a Welch hydraulic steering gear. This is a Buffalo patent, the invention of David Welch, a fireman. There is one on each of the fire tugs.

The friends of George L. McCabe, and steamboatmen in general, will be glad to learn that he has been retained by Williams & Co., who bought out the fueling firm of H. K. Wick & Co. Mr. McCabe has had long experience in this business, knows the docks thoroughly and has made many friends. He and William Barr ought to have a double-barreled cinch on the fueling business at this port.

The Cleveland Chamber of Commerce excursion of Ohio business men to this port on the steamship North Land was a huge success. The North Land is even more gorgeous in her finish, and seems a speedier craft than the North West. She is officered by Capt. W. H. Campau as master, with Capt. J. B. Joyce as first officer, Capt. John Kennedy as second, and Capt. Fred Johnson as third; F. E. Curtis as purser, W. H. Mullen as clerk, Henry Hilton as steward, and Dr. Carr as surgeon. She left on her first regular trip Tuesday.

The controversy between the Northern Steamship people and the excursion boats seems about to be settled in accordance with the terms of a compromise suggested by Mayor Jewett. He proposed that when the big steamers come in on Mondays and Thursdays at 10 a. m., they be given the use of the dock until noon for discharging passengers and baggage. They should then tow to the coal dock to fuel, and that they should have the use of the dock again until 9 o'clock Tuesday and Friday evenings. This will probably be agreed to with some slight modifications.

CLEVELAND, O.

Special Correspondence to The Marine Record.

Mr. John Kist, a well known River street hotel keeper and an ex-city councilman, was buried this week. The funeral was largely attended.

The numerous friends of Capt. William S. Mack will be sorry to learn that he is "under the weather" and obliged to lay up at his home in Lakewood.

The Cleveland Ship Building Co. will complete repairs on the Yuma this week. Besides a number of plates being re-rolled, she required twelve new ones.

The excursion boats Superior and Duluth arrived at Cleveland Sunday evening, and went to the Ship Owners' dry dock for an overhauling. They are scheduled to make their first trips to Euclid Beach Park next Sunday.

It appears that the Alva was not so much damaged as was anticipated after her stranding on the N. Manitou. She had to be jacked up with screws and moved 150 feet before being released. She reached Chicago under her own steam with four of her compartments flooded.

Miss Mary S. Wallace, daughter of Mr. Robert Wallace, president of the Cleveland Ship Building Co., was married on Wednesday night at the bride's residence in Lakewood, to Mr. J. C. Garrett, who is with the firm of Ogleby, Norton & Co., of this city. The young couple have the best wishes of a host of friends.

Capts. Stratton and Stenton formerly of the Menominee Line steamers Norman and German have received new appointments, the former takes charge of the

steamer Charles A. Eddy and the latter the excursion steamer Superior, owned by the Euclid Beach Park Co. A sister boat to the Superior and named the Duluth is in charge of Capt. Joe Gorman.

It is not thought quite justifiable among a number of owners for the big passenger steamers to have exclusive precedence over all other tonnage in locking through at St. Mary's Falls Canal. Cargo steamers as well as the smaller class of passenger boats are eager and zealous to save every hour they can in the course of the season, and although it will not take long to lock through one of the big boats of the Northern Line, the occurrence comes very frequent in the course of a season.

The Detroit and Cleveland Steam Navigation Co. announce that their steamer the City of the Straits, will commence the excursion trips to Put-in-Bay, on June 16. The steamer this season will not stop at Lakeside or Kelley's Island but arrangements have been made to make direct connections with steamers at the islands for those points, on the arrival of the steamer at the island. In connection of the Put-in-Bay trips, the City of the Straits will continue the evening lake rides on every Monday, Wednesday, and Friday evenings.

General manager T. F. Newman, of the Cleveland and Buffalo Transit Co., received from the Detroit Dry-Dock Co. Wednesday, a model of the fine new steamer which the Detroit Dry-Dock Co., is building for the B. & C. Line. The keel has been laid at the Detroit yards and construction on the hull will be pushed rapidly while the fine weather lasts. The model shows a very fine bow, the lines gradually becoming fuller towards the midship section, and leaving a very fine run. She promises to be very speedy according to lines and power.

The small steamer, Post Boy, which is to be a tender to the steamships North Land and North West, made her first trip on Wednesday from the Great Northern docks to meet the North Land outside the breakwater on her first trip up the lakes. Alternately these two steamers will touch Cleveland Wednesday and Saturday mornings on the up trip and Wednesday and Sunday evenings on the down trip. It has been suggested that the idea of embarking or landing in a tender will prevent many timid passengers from taking a trip in the big boats but such a notion is entirely too far fetched and it is a move in the right direction for the managers of the line. Tenders are commonly in use for large steamers and they are a great convenience in nearly all cases.

A contract was closed on Monday with the Michigan Wrecking & Salving Co., of Detroit, to raise the steamer St. Magnus, which capsized in the river at this port on Friday night. Capt. George McLeod represented the underwriters and agreed to the contract. Work will be rapidly pushed and the steamer put in first class order again at the earliest possible time. The loss caused by the capsizing which was brought about mainly through cargo shifting will aggregate it is thought $30,000 on hull and cargo. The contract for righting the vessel is under $3,500. From the various reports it is difficult to say what was the initial cause of the steamers listing over so badly. Capt. Clifford was in the dock custom-house at the time taking out his clearance papers and he is inclined to blame the trash from a passing steamer for lifting the fender strake on to the dock stringer and when she slid off there the St. Magnus took so heavy a list as to be unable to recover in time to right herself before the cargo shifted and threw her over on her beam ends, deck towards the dock. While such accidents do not occur very often the experience is time and again repeated especially with vessels inclined to be anyway tender.

MILWAUKEE, WIS.

Special Correspondence to The Marine Record.

Capt. G. B. Becker, the well-known Muskegon vessel man, is dead.

Muskegon will lease a tug for $100 a month to fight lumber fires.

The Manitou will go on the Chicago & Mackinac route on the 22nd.

The Goodrich steamer Menominee is being renovated and repainted at Manitowoc.

Three cuts 14 feet deep are being made by government dredges at Holland, Mich.

Dredging will be commenced on the improvements at the canal this week. Timber is being secured for the revetment work.

From the opening of navigation to June 1, the coal receipts at this port were 142,315 tons, against 159,278 tons for a similar period last year. Grain shipments show a large increase over last spring.

Capt. Alex McDougall says he will adopt the Japanese launching custom hereafter, releasing a cage of birds instead of baptizing the bow with champagne. This new style is all wrong though.

The Cleveland-Cliffs Iron Mining Co., which took an option on the Escanaba River Land & Iron Co.'s property about a month ago with a view to buying or leasing the Swanzy mine, has surrendered its option, after three weeks fruitless exploring with a diamond drill.

A few years ago it required nine or ten hours to make the trip between Chicago and Milwaukee on the best boats. The wooden steamer Indiana built in Manitowoc by the Burger & Burger Co., in 1890, cut the record to six hours, which has since been reduced half an hour. The Virginia, built by the Globe company, has covered the 90 miles in 4:20. The North West last week cut the record to 4:10, and both the Virginia and the Christopher Columbus, which have been having their machinery thoroughly overhauled, will do their best to lower this record. The Virginia opened her season last Sunday, and the Columbus will go into commission next Saturday.

The steamship Northwest, with her distinguished party from Chicago and the east, reached Duluth at 4:30 o'clock Sunday afternoon, an hour ahead of schedule time. The stockholders of the Minnesota Iron Co. left at once by special train for Two Harbors. Most of the party were from Chicago, but New York, Brooklyn, Pittsburg, Philadelphia, Cleveland, St. Louis, Buffalo, Milwaukee, were all largely represented. The Northwest left Chicago at 1:14 o'clock Friday afternoon. The steamer slowed down for an hour on Lake Superior to allow of some photographs being taken. The notable people on board are delighted with the magnificent steamer.

The steam barge Raleigh was damaged several hundred dollars worth by the big fire here Monday morning. A small schooner was also slightly scorched. The Raleigh's escape from destruction was a narrow one. The cabin, pilot-house and boiler room were all ablaze before the crew knew anything about the fire. Engineer Garardo was the first to be awakened, and immediately set the engines in motion. There was only twenty-five pounds of steam up and the machinery revolved but slowly. Six times the engineer's coat took fire and finally he had to throw it off entirely. His face and hands were badly scorched, but he managed to run the boat clear of the fire.

WEST BAY CITY, MICH.

Special Correspondence to The Marine Record.

Capt. Wm. Reid, the submarine diver and wrecker narrowly escaped death last week, on account of a leaky suit, while at work under water.

Capt. Geo. W. Starkey has resigned command of the schooner Paisley, to bring out a new boat for Capt. James Davidson. Andrew Rastofoson will sail the Paisley.

Wheeler & Co. have about completed a tug for Henry Corgan, light keeper at Copper Harbor, to be used by steamers that may require her services at that point. At present the nearest boat that can be had in a case of emergency is at Houghton 62 miles distant.

According to assistant engineer R. H. Muehle, who has charge of the government end of the Saginaw River improvements, the river is one foot below the normal or zero stage its whole length.

F. W. Wheeler Co., W. Bay City are extending their metal shipyard 300 feet. The steel steamer No. 108 will be launched in about two weeks. The handsome yacht built for Isaac Bearinger is now nearly completed, she is 107 feet in length and is fitted with a water tube boiler furnished by the Marine Iron Works of Bay City. Work has begun on Nos. 112 and 113, the former vessel being a 400 foot steamer and the latter 385 feet over all.

The McKinnon Manufacturing Co. are receiving a liberal share of marine patronage. They have recently placed a new boiler on the Alleghany and have orders for one for the I. Watson, Stephenson. Propeller wheels have been lately fitted on the tugs Tempest, also the Clat and Strohn of Sheboygan.

The National Boiler Co., have orders for a large amount of repair work and the outlook for a brisk season's business is said to be excellent.

The steamer Rappahanock closely follows the launch of the large schooner Granada at Capt. James Davidson's shipyard. Early this fall the yard will be equipped for the building of metal craft. Work is being pushed on the two new car ferries. Mr. J. W. Wood is watching the construction of these ferry boats for the railroad company to whose order they are being built. A. J. Prescott is the master mechanic.

MANITOWOC, WIS.

Special Correspondence to The Marine Record.

There has been no busier spot on the shores of Lake Michigan during the past few months than the yards of H. B. & G. B. Burger at this port. All classes of vessels have been handled and the stock of Burger & Burger has gone up a hundred per cent on rebuilding and repair work. From passenger line steamers down to lumber hookers the yard has rebuilt, lengthened and repaired vessels hailing from nearly all Lake Michigan ports and this, too, to the best satisfaction of the owners. The Manitowoc shipyard has a reputation for skillful and staunch work and this no doubt has had a good deal to do with the numerous contracts which have been placed at Burger's recently.

The Manitowoc Steam Boiler Works are about to build one of Conrad Starke's patent improved Scotch type boilers 8½ ft. diameter, 12 ft. long with two 36-inch furnaces to be allowed 150 lbs. steam for the steambarge Rand. The Conrad Starke patent improved Scotch type boiler on the steamer E. A. Shores, Jr., has proved a complete success.

PORT HURON, MICH.

Special Correspondence to The Marine Record.

The Canadian tug Kittie Haight has been fined $140 for towing vessels between American ports.

Capt. George Barnes has purchased the schooner Dauntless, from Capt. Glass. The price paid is said to have been less than $500.

The Robeson ship-chandlery house at this port is as prosperous and well patronized as usual, a considerable run of trade has been attended to this season.

McMoran & Co. have bought the steam barge City of Concord from R. Bottsford, of Alpena. She was burned at Toledo late in the season of 1893, and the McMorans will rebuild her.

Capt. Wesley C. Brown took the North West up the American side of the river to give his fellow townsmen at St. Clair a good sight of her. He also fired them a salute from the bridge.

The tug building for B. B. Inman, of Duluth, by the Jenks Ship Building Co., is now being equipped and will soon leave for Lake Superior. She is fitted with a Sheriff's steam steering gear and a Dean Bros. independent condenser.

The barge Atmosphere which was in collision with the steamer Saginaw in Detroit River recently, has completed repairs at Marine City. She received some new stanchions, covering-board, rail, monkey-rail and a new cat head, beside extensive calking.

The tug B. B. Inman, built for her namesake, the Duluth tug man, was launched last Thursday by the Jenks Ship Building Co. She is a duplicate of the well-known ice fighter, the C. D. Thompson, but has still more power, her engines being compound, 18 and 34 by 30-inches stroke.

The new boat which Abram Smith & Son are building at Algonac is about finished. Her dimensions are 230 feet keel, 36 feet beam, and 12 feet depth. Without machinery she will carry 1,100,000 feet of lumber on 11½ feet draft. Unless she is sold, no machinery will be put into her this season.

A company is organizing to build a steam ferry line between Marine City and Sombra, Ont. The intention is to build a new boat at Marine City on the same lines as the Welcome, which plies between St. Clair and Courtwright, Ont., and to induce, if possible the Erie & Huron R. R. to subsidize the boat.

The Wolverine Dry Dock Co. was the lowest bidder on the twelve lifeboats for which General Superintendent Kimball, of the life-saving service, asked for proposals, and will undoubtedly get the contract. The price is $1,860 each. Six are to be delivered at New York, and six at Grand Haven, Mich.

The new steamer which Alex Anderson is building at Marine City for Farwell & Smith, of Detroit; will be ready to launch about the fifteenth. She measures 188 feet over all, 175 feet keel, 34 feet beam, and 12 feet molded depth. Besides the customary steel diagonal strapping and chording, she has steel keelsons, 24 by ⅝ inches and extra heavy floors 15 inches square in every frame. Stringers have also been placed on the under side of the deck along the edge of the hatchways, which will strengthen her materially. The engine and boiler of the steambarge George L. Colwell have been placed in her and will furnish ample power. She will have all modern equipment—steam windlass, capstans, deck hoists, etc., and will rate A1*. The schooner D. P. Dobbins, owned by the same firm, will tow behind the new steamer.

TREASURY DECISIONS RELATING TO VESSELS.

INSPECTIONS OF FOREIGN STEAM VESSELS TO BE MADE BY LOCAL INSPECTORS.

TREASURY DEPARTMENT, March 5, 1895.

Sir: You will please inform local inspectors in districts where foreign steam vessels are inspected, that under an act of Congress approved March 1, 1895, the office of Special Instructor of Foreign Steam Vessels was abolished, and that hereafter the inspection of such steamers will come under the jurisdiction of the local inspectors, who will inspect all foreign steamers on application, and issue certificates thereupon, signed by them as "local inspectors." Such inspections, however, are to be made under the General Rules and Regulations for the inspection of Foreign Steam Vessels (Form 2180. Very respectfully,

CHARLES S. HAMLIN,
Acting Secretary.

JAS. A. DUPONT, Esq.,
Supervising Inspector-General, Steamboat-Inspection Service, Treasury Department.

STEAMERS MAY BE INSPECTED PREVIOUS TO EXPIRATION OF CERTIFICATE, WHEN BOUND ON FOREIGN VOYAGE.

TREASURY DEPARTMENT, March 13, 1895.

Sir: In reply to your letter of the 11th instant, requesting inspection of the steam yacht Oneida on the 15th instant, though the regular inspection is not due till May 18 next, because of having put a new boiler in the steamer, and intending to sail next week, you are informed that the Supervising Inspection-General will direct the local inspectors at New York to make the required inspection on the 15th instant, under the assumption that the vessel is going out of United States waters, not to return until after the expiration of the current certificate of inspection. If the above assumption is incorrect, then there is no authority to anticipate the date of inspection more than thirty days, which the inspectors have authority for under general regulations approved February 20, 1895. Respectfully yours,

CHARLES S. HAMLIN,
Acting Secretary.

E. C. BENEDICT, Esq., 29 Broad street, N. Y.

LOCAL INSPECTORS TO REVOKE OFFICERS' LICENSES WITH FORGED INTERLINEATIONS OR CHANGE OF RATING.

TREASURY DEPARTMENT, March 11, 1895.

Sir: Referring to your letter of the 9th instant, In re-Complaint against Chief Engineer Fred S. White, charged with increasing the grade of the license issued to him to act on vessels of 800 tons, and changed by said White to read "3,000 tons," and asking the Department's instructions in the matter, you are informed that the attorney general of the U. S., having rendered an opinion, dated September 17, 1890, "that under the present laws there can be punishment inflicted on persons making false oaths in the application for officers' licenses, or forging or interlining certificates of license increasing the grade," there is nothing you can do in the premises other than to leave the matter with the local inspectors, who you say, now have the case under advisement; whose duty it would be, if the facts charged are sustained, to revoke the changed license, and refuse to relicense the person found guilty of changing a license. Very respectfully,

W. E. CURTIS,
Acting Secretary.

Collector of Customs, Norfolk, Va.

ACCOMMODATIONS OF SEAMEN.

TREASURY DEPARTMENT,
BUREAU OF NAVIGATION,
WASHINGTON, D. C., March 4, 1895.

To Collectors of Customs and others:

Your attention is invited to the following provisions relative to the accommodations of seamen, of the act approved March 2, 1895, entitled "An act to provide for deductions from the gross tonnage of vessels of the United States." The act will take effect April 1, 1895:

"Every place appropriated to the crew of the vessels shall have a space of not less than seventy-two cubic feet and not less than twelve superficial feet, measured on the deck or floor of that space, for each seaman or apprentice lodged therein. Such place shall be securely constructed, properly lighted, drained, and ventilated, properly protected from weather and sea, and as far as practicable properly shut off and protected from the effluvium of cargo or bilge water; and failure to comply with this provision shall subject the owner to a penalty of five hundred dollars. Every place so occupied shall be kept free from goods or stores of any kind not being the personal property of the crew in use during the voyage; and if any such place is not so kept free the master shall forfeit and pay to each seaman or apprentice lodged in that place the sum of fifty cents a day for each day during which any goods or stores as aforesaid are kept or stored in the place after complaint has been made to him by any two or more of the seamen so lodged. No deduction from tonnage as aforesaid shall be made unless there is permanently cut in a beam and over the doorway of every such place the number of men it is allowed to accommodate with these words: "Certified to accommodate * * * seamen."

The third section of the act provides:

"Sec. 3. That the provisions of this act requiring a crew space of seventy-two cubic feet per man shall apply only to vessels the construction of which shall be begun after June thirtieth, eighteen hundred and ninety-five."

EUGENE T. CHAMBERLAIN,
Commissioner.

Approved:
S. WIKE, Assistant Secretary.

DID NOT AVOID LIBELING.

Regarding the dispatch published a few days ago stating in effect that the Canadian steamer Jack steered clear of American waters to avoid libeling on account of her collision with the steamer Norman, lately owned in Cleveland, Mr. George McLeod, representing Smith, Davis & Co., underwriters of Buffalo, makes a denial of the report, in which he says:

"I had charge of the Jack in behalf of the underwriters. I employed a wrecking outfit from Mr. F. W. Gilchrist, of Alpena. When the vessel was raised I took her to Alpena, made temporary repairs to go to Port Huron, made arrangements with the dry dock at Port Huron before I left Alpena. On arrival at Port Huron I stopped at the dry dock to carry out my agreement with the dry dock, and while tied up to the dock the marshal came on board and asked me if I would take the vessel to Detroit. I told him I would, providing he would take the responsibility of sinking on the way there. The avoidance of a libel on the Jack never was thought of in any way."

ABSTRACT OF BIDS FOR IMPROVEMENT AT THE "SOO."

Abstract of bids for "Improving St. Mary's River, at the Falls, Michigan, removing material from the movable dam and from the 800-ft. Lock Approaches; also constructing Piers for the 800-ft. Lock Approaches," received and opened June 7, 1895, in accordance with advertisement dated May 8, 1895:

No.	Name and address of bidder.	Rock Excavation, 31,827 cub. yds., more or less Price per cub. yd.	Earth Excavation, 111,000 cub. yds., more or less. Price per. cub. yd.	Filling 60,000 cub. yds, more or less. Price per cub. yd.	White Pine Timber, 96,040 cub. ft. more or less. Price per cub. ft..	Hemlock Timber, 228,969 cub. ft., more or less. Price per cub. ft.	Tamarack Piles, 60 more or less. Price each.	Wrought Iron, 235,072 lbs., more or less. Price per pound.	Cast Iron, 63,580 lbs., more or less. Price per pound.	Approximate Total
1	James B. Donnelly, Buffalo, N. Y.	$1.40	.22	.23	.29	.19½	$16.00	.3	.3	$165,197.91
2	Dunbar & Sullivan, Buffalo, N. Y.	1.80	.27	.37	.28	.19	10.00	.2½	.2	187,602.31
3	R. J. Cram, Detroit, Mich.									
4	James L. Lipsett, Robert Gregg, and Jared A. Cook, Sault Ste Marie, Mich.	1.50	.48	.49	.24½	.18¼	10.00	.3	.2	204,660.90
5	Powell & Mitchell, Marquette, Mich.	2.25	.25½	.38½	.25½	.24	22.00	.3¼	.2	212,689.95
6	Gearing & Lally, Detroit, Mich.	1.40 2.50	.90 .65	.60 .40	.24¾ .30	.21 .21½	10.00 3.00	.2 .2½	.1½ .2¼	258,566.33 261,245 18
7	Hickler Bros. & Mitchell, Sault Ste Marie, Mich.	2.00	.80	.60	.26	.18	20.00	.2	.1½	261,493.96
8	Carkin, Stickney & Cram, Detroit, Mich.	2 60	.43	.56	.36	.24	15.00	.4½	.2½	266,674.90

Abstract of bids received on Monday, June 10, 1895, for furnishing an iron tower for Calumet Pierhead, Ill.:

Russell Wheel & Foundry Co., Detroit; for Tower.	$3,735.00
For Tower and complete set of patterns	4,185.00
John P. McGuire, Cleveland, Ohio; for Tower..	3,870.00
For Tower and complete set of patterns	4,155.00

NEW ORLEANS, La., June 10, 1895.

Abstract of proposals for constructing coffer-dam and excavating and piling foundation for Lock at Plaquemine, opened June 6, by Major James B. Quinn, Corps of Engineers:

Chicago Dredging & Dock Co., Chicago, Ill.	$117,421.00
Ethan Allen Burriss, New Orleans, La.	93,250.00
Frederic Harris, Dallas, Texas	113,243.35
W. J. Bentley & Co., New Orleans, La.	104,616.00
R. L. Van Sant and R. P. Lutes, St. Louis, Mo	106,460.00
Chas. Clarke & Co., Galveston, Texas	104,000.00
Geo. M. D. Geigsby, Jefferson, Tex	112,900.00

DIRECTORY OF AMERICAN PUBLIC WORKS.

"The United States Public Works Guide and Register" is the title of a very handsome book 9x12 inches in area and 2 inches thick, printed on very fine paper and containing nearly 300 pages of text, bound substantially in cloth and boards, which will be found to fill a new field in the line of information. It contains a summary of the methods of construction and character of materials and plant used in the public works under the charge of the War and Treasury Departments, and of the commissioners of the District of Columbia, including works of river and harbor improvement, buildings at posts of the United States army, lighthouses, public buildings, life-saving stations, and works of municipal engineering of Washington, D. C.; also of the laws, regulations and forms prescribed for the conduct of such works; and a directory of the United States agents in charge of these works, and of contractors for them, also of manufactures of and dealers in machinery, materials and miscellaneous supplies used in the construction of the works. It has been got up as a book of reference for all persons interested in the public works, and for engineers and contractors in general, by Capt. W. M. Black, of the Corps of Engineers of the United States army, member of the Americau society of Civil Engineers, and is illustrated by over forty photogravures and working drawings, which make it very attractive as well as valuable. The publishers are John Wiley & Sons, 53 East Tenth street, New York city, and the price of the book is $5.

CONFLICTING TESTIMONY.

Supervising inspector of steamboats, Gen. James A. Dumont has received a statement sworn to by Chas. Wilson, master of the steamer Joseph L. Hurd, John Brockie, second engineer; D. MacManerrey, chief engineer, and John S. Gronday, mate, giving their version of the recent collision between the Hurd and Cayuga.

"We heard a fog signal from an approaching steamer ahead," says the master, "and blew then a long blast of the big steam whistle which was answered by one similar whistle by the approaching steamer. After a few minutes, I signaled the engineer to stop the engines and then gave two bells to back. I could hear the approaching steamer by the noise of the water which the steamer occasioned as she came at a rapid rate of speed. Shortly after, I could see the steamer coming right for us, striking the propeller Hurd on the port bow with such force that it cut it clean off."

Capt. Graves of the Cayuga, sends a statement not sworn to. He says that when the fog shut in, he checked to six miles per hour. The Hurd sounded one blast which was answered by one blast.

"I saw the headlight and topmast of the Hurd about four points on our starboard bow. I saw I could not clear her. I stopped and backed strong. Our way was stopped. The Hurd coming at a good gait, struck the Cayuga on the star-board bow aft of the collision bulkhead."

Gen. Dumont, when asked what conclusions he reached after perusing the reports, said; "I confess I am as much at sea as the captains seem to have been. I cannot understand how one vessel could have been struck on the starboard side and the other on the port unless the Hurd turned around. The collision shows the folly of two vessels which are not visible to each other attempting to give passing signals in case of fog.

MARITIME LAW.

CHAPMAN DERRICK & WRECKING CO. v. PROVIDENCE-WASHINGTON INSURANCE CO. & AL.

U. S. District Court, Southern District of New York.

SALVAGE SERVICE UNDERTAKEN BY ORDER OF INSURANCE COMPANY—PAYMENT OF SALVAGE TO OWNER OF VESSEL—DEFAULT BY HIM—LIABILITY OF INSURANCE COMPANY.—A vessel having been sunk, the libellant, a wrecking company, undertook to raise her, acting upon the orders of a representative of two of the four insurance companies interested which orders were afterwards ratified and approved by the other two. The salvage operation was for the benefit of insurance companies, to whom it was of moment to ascertain the cause of the loss, and the extent of their liability upon their valued policies of $20,000. It also appeared that the libellant refused to do the work upon the credit of the vessel alone. The vessel being raised, the insurance companies agreed to the libellant's charge of $5,000, and, having settled with the owner of the vessel for $2,500, they paid over to the latter $7,500 upon his undertaking to pay libellant the $5,000 for the salvage service. This the owner did not do, and subsequently died insolvent, whereupon libellant brought this suit against the companies to recover the $5,000 for its services. Held, that they were legally liable for the amount.

CLYDE S. S. CO. v. STEAMER ELDORADO AND STEAMTUG FLORENCE.

U. S. District Court, Southern District of New York.

COLLISION—STEAM VESSELS CROSSING—RULE OF THE STARBOARD HAND.—The steamship Eldorado started out from the south side of Pier 25, North River, giving the long whistle required by law as she did so. At the time the tug Florence, with a tow, was coming down the stream, on the Eldorado's starboard hand, but she did not hear the latter's long whistle, her attention being given to another vessel which was crossing her bow. When the pilot house of the Eldorado emerged from behind the shed on the pier, her master saw the Florence, and gave two whistles, indicating that he intended to go ahead of her. The Florence did not hear this whistle, but herself gave one whistle to the Eldorado, which was not heard by the latter. The Eldorado whistled twice again, and the Florence replied with one whistle. Soon afterwards the Eldorado reversed her engine, but too late to avoid collision. Held, that the Eldorado was solely responsible, as under the rule she was bound to avoid the Florence and the latter was bound to keep her course.

BROWN, J.

THE OREGON.

COLLISION—LIGHTS, LOOKOUTS AND SIGNALS—INTERNATIONAL RULES—STIPULATION FOR RELEASE—INTERVENING PETITIONS.—1. Where a vessel anchored in a river on the edge of the ship channel, well out of the usual track of ocean steamers plying up and down the river, and provided with an anchor watch and a proper statutory anchor light, is run into by a steamship, the presumption is that the latter is in fault, and the burden is upon her to exonerate herself from liability.

2. Where the circumstances require more than ordinary care, as in the case of a steamer running at a speed of 15 miles an hour, on a dark night, in a narrow channel like that of the Columbia River, where there is great probability of meeting other vessels, a deck watch composed of the river pilot in command, stationed upon the bridge just above the pilot house, a man at the wheel, and a lookout upon the forecastle head, is insufficient, and prudent navigation requires a lookout to be stationed on either bow.

3. While a licensed harbor or river pilot supersedes the master, for the time being, in the command and navigation of the ship, yet the master is not justified in leaving the pilot in sole charge of the vessel. He is still in command of her, as far as her navigation is concerned, and is bound to see that there is a sufficient watch on deck, and that the men are attentive to their duties; and he may advise with the pilot, and even displace him for manifest incompetence.

4. Deficiencies in the watch, consisting in failure to maintain the number of lookouts which prudence requires, and the failure of the master to supervise the men on duty while the vessel was in charge of a pilot are to be regarded as evidences of negligence, and illustrative of lax management in the navigation of the vessel, rather than as distinct faults in themselves, and would not suffice to condemn her in the absence of proof that they contributed to the collision.

5. A steamship, which ran into a vessel anchored in the Columbia River, well out of the usual track of steamers on a dark night, held in fault because her lookout was not such as prudence required under the circumstances, and because negligence was shown in keeping too close in shore, and either mistaking the anchor light for a beacon light on the shore, or failing to see it at all, and steering directly upon the anchored vessel, without perceiving her or hearing the cries of the watchman on her deck until too late to avoid collision. 45 Fed. 62, affirmed.

6. The rule that, where a vessel which is clearly shown to have been guilty of a fault sufficient to account for the collision seeks to impugn the management of the other vessel, there is a presumption in favor of the latter that can only be rebutted by clear proof of contributing fault (The City of New York, 13 Sup. Ct. 211, 147 U. S. 85), is peculiarly applicable to the case of a vessel run into while anchored, because there is not only a presumption in her favor, but a presumption of fault on the part of the other vessel.

7. The statutory provision directing collectors and other chief officers of the customs to require all sailing vessels to be furnished with proper signal lights, and that such vessels shall show a lighted torch to steam vessels approaching at night (Rev. St. 4234), is strictly no part of the International Code, which was originally adopted in 1864, and applies only to American vessels.

8. The statute requiring all sailing vessels to be furnished with proper signal lights, and to show a lighted torch to steam vessels approaching at night (Rev. St. § 4234), has no application to vessels at anchor, but was designed to supply a deficiency in the International Code with respect to vessels under way, by providing a means of warning a vessel coming up astern or approaching from either side.

9. Quaere, whether the section, so far as it applies to the high seas, was not repealed by article 11 of the act of March, 1885, (23 Stat. 440), which requires that a ship being overtaken, shall show from her stern a white light or flare-up light.

10. The rules of the International Code are to be regarded as sufficient protection for a vessel under ordinary circumstances; and one vessel meeting another, whether of the same or a different nationality, has a right to assume that both are governed by the same laws, and may regulate her conduct accordingly.

11. Exceptions to the international rules, though provided for by rule 24 (relating to "special circumstances"), should be admitted with great caution, and only when imperatively required by the particular circumstances. Therefore, under all ordinary circumstances, a vessel discharges her full duty and obligations to another by a faithful and literal observance of these rules.

May 6, 1895.

NEW TONNAGE.

The Bureau of Navigation, Treasury Department, Washington, D. C., only issued official numbers to two lake-built craft during the week ending July 1, 1895. Under steam 39 tons was registered, the Philip Gerst, of Buffalo, 23 tons, and the Rhoceen, of Grand Haven, 16 tons.

LAUNCH OF THE RAPPAHANOCK.

As we go to press the fine wooden steamer Rappahanock is being launched from the West Bay City shipyards of Capt. James Davidson. Her general dimensions are 330 feet in length. 43 feet beam and 26 feet molded depth. A German society, The Arbeiter, held a convention this week, at Bay City, and voted to attend the launch in a body. Over 1,000 members will accordingly watch the successful launch of the new steamer.

DREDGING ESTIMATES.

The formation of an accurate estimate of the probable cost of dredging in any given locality presents a difficult problem, and it is nearly equally disadvantageous to have the contract for the work either too high or too low. In forming a dredging estimate the following items should be considered, viz., total amount of work to be done; probable average dredging per day, depending upon material, depth of cutting, range of tide, depth of water, and exposure of site; distance to dumping-ground, or cost of depositing dredged materials on shore; distance of site of work from dredging plants, and risks attending a passage thither; value of plant and percentage of depreciation for time required for the work; fire and marine insurance on plant; repairs to plant; operating expenses; contractor's profit.

TOLEDO'S NEW BRIDGE.

An important committee from Toledo paid a visit to Col. Jared A. Smith, of the United States Corps of Engineers, Cleveland, this week, relative to the bridge which the City of Toledo wishes to build across the Maumee River. The committee wishes to secure, if possible, some assurance that a modification of the proposed bridge, as approved by the government, would not be objectionable. The plans as approved show a distance of 38 feet between water and bridge. The contract to build the bridge, taken by the Smith Bridge Co., shows a clear space of but 18 feet. The proposition submitted to Col. Smith was to maintain the 38 feet head over the navigable portion of the stream, a width of 700 feet, then, by changing to a deck bridge, reducing the head to 18 feet. It is understood that the entire question is now in the hands of the Secretary of War, who will no doubt be advised by the Chief of Engineers.

BUFFALO COAL TRADE.

The following statistics of the coal trade of Buffalo were compiled by Mr. William Thurstone, secretary of the Merchants' Exchange:

Coal movements at Buffalo to June 1st, 1895, with comparisons of preceding years. Receipts and shipments by railroads not reported by request. Lake receipts for three years, none. Shipments by lake from opening of navigation to June 1st, 259,788 net tons, as compared with 341,774 net tons in 1894 and 541,479 net tons in 1893. The receipts by canal thus far this season, none; in 1894, none; in 1893, 4,560 net tons. The shipments by canal thus far this season, 896 net tons, as compared with 461 net tons in 1894 and 629 net tons in 1893.

Lake freights from opening of navigation to June 1st, 40 @ 30 @ 35 @ 40 cents to Chicago, 30 @ 35 cents to Milwaukee, 15 cents to Lake Superior ports, 30 @ 35 cents to Green Bay, 25 cents to Toledo, 40 cents to Racine, 35 cents to Saginaw, and 20 @ 25 cents to Bay City. A year since freights were 60 cents to Chicago, 55 cents to Milwaukee and Green Bay, 30 cents to Duluth, Lake Superior ports, Toledo and Detroit, 35 cents to Bay City, 60 cents to Racine, and 40 cents to Saginaw.

The shipments by lake thus far this season shows a falling off of 81,956 net tons as compared with 1894 and 281,691 net tons as compared with 1893.

The distribution of coal by lake thus far this year was as follows: 90,570 tons to Chicago, 89,525 tons to Milwaukee, 11,650 tons to Duluth, 35,700 tons to Superior, 6,190 tons to Toledo, 3,000 tons by vessel to Tonawanda, destination unknown, 3,900 tons to Gladstone, 10,580 tons to Manitowoc, 800 tons to Sault Ste. Marie, 300 tons to Bay City, 1,350 tons to Saginaw, 375 tons to Racine, 1,760 tons to Green Bay, 300 tons to St. Clair, 3,721 tons to Lake Linden, 750 tons to Hancock, 632 tons to Owen Sound, 400 tons to Put-in-Bay, and 60 tons to Serpent River.

THE NORTHERNER CASE AGAIN.

Judge Childs and a jury spent the greater part of Monday, at Buffalo, unraveling the complications in the action brought against the Western Assurance Co., of Canada, to recover $6,000 insurance on the steamer Northerner, which was burned at L'Anse, Mich., December 12, 1892. The court decided to direct the verdict in favor of the defendant, subject to the opinion of the general term, to which the questions of law involved have been referred. The plaintiffs in the action are Edward Clarkson, John Keiderhouse, Edward C. Maytham, Lambert W. Drake and Ann E. Maythem, as administrix of the estate of the late Thomas Maytham. In the papers submitted to the court, it is said that Melville F. Brown and Charles H. Blakeslee bought the steamer from the plaintiffs about four years ago for $50,000, and a mortgage was given to secure payment of the amount. The mortgagers agreed to keep the boat insured against loss, and in compliance with the agreement a policy of $6,000 was taken in the Western Assurance Co. When the steamer was destroyed proofs of loss were submitted to the insurance company, but the amount of insurance has never been paid. On August 30 Brown and Blakeslee assigned their interests to Clarkson, who is liquidator of the Ontario Coal Co.

DEATH OF TWO WELL-KNOWN LAKE MEN.

The little steam yacht Gitana, measuring 5 tons, owned by George B. Sloan, Jr., manager of the Oswego Car Spring Works sailed from Oswego last Thursday morning for Alexandria Bay, and nothing has since been seen of her. The yacht and her three occupants were without doubt lost in the middle of Lake Ontario.

Capt. John E. Blackburn, the well-known lake shipmaster and ex-keeper of the Oswego life-saving station, was in command. Among his former command were the schooners West Side, J. E. Gilmore and Dan Lyons. He was thoroughly acquainted with the entire chain of lakes and retired to become keeper of the Oswego life-saving station. This post he held for thirteen years. After this he kept a boat and bathing house. He was prominent in Masonic circles, and stood high in the esteem of all who knew him. He leaves a wife, two sons and one daughter, whose husband, George Richards is mate of the schooner Mabel Wilson.

John A. Sprague, who was running the engine of the yacht, was born at Henderson Harbor in 1856, and early began active life as a sailor. He ran as engineer on a number of large lake boats. He leaves a wife and child. He was very well thought of in Oswego, N. Y.

THE MARINE RECORD

ESTABLISHED 1878.

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IRVING B. SMITH, }
CAPT. JOHN SWAINSON, } . . . PROPRIETORS

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CLEVELAND, O., JUNE 13, 1895.

A BRIGHT idea has occurred to a submarine diver and wrecker on the lakes. He suggests the practicability of raising sunken metal vessels by means of powerful magnets, Mahomet coffin fashion.

HANDLING lumber is rather slow and careful work but the record at Washburn, Wis., a few days ago, shows 850,000 feet stowed on board ship in sixteen hours. We opine that this service can not be duplicated at any other port in the world.

WE note that Sir Charles Tupper is mentioned by some of our contemporary's as still holding the office of the Dominion Minister of Marine and Fisheries. The Hon. John Costigan now holds that important position under the Dominion government.

CHAIRMAN FRANK FLOWER, of the International Deep Waterways' Association, has called the executive board to meet in Chicago June 25. At this meeting the call will be issued and the plans perfected for the international deep waterways' convention in Cleveland, in September, at which it is expected that more than 1,000 delegates will be present.

THE Dominion steamboat inspection service seems just as lax in holding official inquiries relative to loss of life and property on steamers as the United States authorities are, as witness the Norman-Jack collision case. It may be, however, that one side is watching the other and waiting to take advantage of the first decision. Inquiry has been held and a decision rendered on the foundering of the Pacific coast steamer Collima, but comparativeiy nothing has yet been heard from the Hurd-Cayuga case coming under the jurisdiction of the officers at Grand Haven, or the Jack-Norman case presumably in the Detroit district. The officials of the localities wherein these serious losses occurred should waken up to a sense of their duties in the case of casualties involving loss of life and property.

MR. E. S. WHEELER, assistant engineer and general superintendent of the St. Mary's Falls canal, has received the following instructions: "Please permit all vessels of two thousand five hundred tons or more, carrying passengers only, to pass through the Soo lock as soon as practicable after arriving at the canal. By direction of Secretary of War. W. P. Craighill, Chief of Engineers." It would appear from the foregoing that the precedence to be given the two Northern Line boats in locking through the canal is not so mandatory as some of the daily papers seem to assume. It may be noticed that the order simply states "as soon as practicable after arriving at the canal," therefore, a wide discretion is given to the officer in charge, and we presume he will see that no injustice is done to other tonnage in the matter of the passenger steamers taking precedence when cargo steamers are ready to be locked through. It would be well for general transportation interests to see how the foregoing instructions affect commerce before entering a protest against the apparent discrimination. Facts and figures are weightier than a general statement embodying probabilities only.

A CANAL TO THE COAST.

The International Deep Waterways Convention which is to be held in Cleveland next September, will again give force to the much mooted project of connecting the lakes with the coast by means of a ship canal adequate to meet the probable demands of transportation and commerce a generation or two hence.

The association is formed on a successful basis and the officers are all men of repute besides holding important business relations in active conjunction with the entire commerce of the Northwest. Such being the status of the deep waterways convention and committees, it is self-evident that they will not adjourn from the Cleveland convention without actual steps having been taken to bring about an international platform with Canada, if needs be, or it is within the bounds of probability to say that the American delegates may inaugurate a sentiment towards a purely American waterway, whereby American produce may be transported at a minimum cost, that is, without breaking bulk, not only to the seaboard, but across the Atlantic in a word, the 65,000,000 population of the United States will not buckle down to the tenth part of their relative numbers in Canada on this question, although it cannot be gainsaid that the Canadians hold the balance of power in this connection to-day.

A deep waterway from the Great Lakes to the coast is an assured factor, now let us shape our ends so as to take due advantage of what we may know to be an eventual certainty.

Hitherto, it seems that we have counted upon Canadian supremacy or perhaps facilities, and this is more distinctly prominent when we notice the bearing of the international platform of principles subscribed to by many of our own people. In the resolution of the convention held November 27, 1894, in Chicago, the delegates give the first place to a St. Lawrence route and barely mention their impression that something may also be made out of a waterway via the Hudson River. Furthermore, we are asked to consult Canada as to the advisability of digging a deep water canal through Dominion territory at a joint expense, under laws of maritime neutrality, etc., all of which sounds fairly well on paper, but is distinctly impracticable in the comity of nations where it is possible to engender a belligerent feeling between them.

The United States should have a waterway of its own, unincumbered by international comprisals or treaties and to this end must the American delegates of the international association eventually work.

Again, it is all very well to state that vessels may load at Chicago, Duluth or Superior and carry their cargoes to Liverpool, London, South America or Bombay without breaking bulk, but it cannot be done without inaugurating the most radical changes in the transportation of commerce that ever the world has witnessed, and when all this takes place Chicago may become a general seaport, but not until then.

The projectors af the deep waterway to the coast are not by any means chary in their favors, for they propose to make no less than fifty ports subject to ocean commerce, ranging from Kingston, Lake Ontario, to Superior, Wis., and to thereby open up to the world the products of the west, but it is safe to say that such calculations are not only beyond the age and times, but are purely quixotic in their character, as anyone conversant with ocean carriage as opposed to lake transportation might easily realize.

The members of the convention, in support of their somewhat ethereal project, advance the arguments that when the Erie canal closes for the winter, flour from the west jumps from forty to sixty cents per barrel and this feature closes down the western mills, also that the saving in freight to the west by having water transportation is more than $200,000,000 each season, while the deep water canal they say, will only cost $50,000,000. Well! should these figures be capable of demonstration in the light which they have been presented, we can but say that the canal ought to be built instanter, but in the meantime, we are prone to doubt the returns thus apparently manifested and to say that one of the worst evils that can befall strictly lake industries would be the opening of such a waterway. On the other hand, we must candidly admit that for the best interests of western development and universal commerce at large, the earlier that we can reach 2,000 miles into this continent by water and via the chain of lakes it will give the quickest, greatest and most beneficial results to the producing sections of the illimitable west, and to this end will the canal eventually be projected, engineered and accomplished as a successful fairway of commerce. Now let the Americans control it, the waterways we mean.

RIVER AND HARBOR IMPROVEMENTS.

The tour around the lakes just completed by the Hon. Binger Hermann, of Oregon, has served at least to open his eyes relative to the importance of modern marine practices, commerce and shipbuilding at lake ports.

For eight years Mr. Hermann has served on the river and harbor committee of the House at Washington. He is now the senior Republican member of the committee and his friends say he will probably be the next chairman of that important body, therefore, the action taken all along the line by members of the Lake Carrier's Association in pointing out to the prospective chairman of the river and harbor committee in the House of Representatives of the Fifty-fourth Congress the volume of lake traffic is in every way commendable and will certainly result in facilitating marine legislation according to present and future requirements.

In the course of his travels Mr. Hermann frequently remarked that the lakes had a splendid marine commerce, in fact to use his own expression, "one of the greatest in the world." Although the congressman has made a study of coast, lake and river interests for the past several years, he was simply astonished at the extent of the commerce transported over the lakes and the facilities for shipbuilding as well as its kindred industries, engine, machine, boiler works, etc.

A feature which occurred to Mr. Hermann during his tour, as of course it would to all who have traveled to any extent, or visited the principal shipping ports of the United States, not to mention those of other maritime countries, is the narrow, crowded and in many instances dilapidated condition of several prominent harbors on the lakes, he said, not only are the entrances usually too narrow for present commerce, but the depths are not what they should be and we ought to build with an eye to the future, not only for present demands.

All property, dock frontage, etc., inside of the harbor lines, is, of course, under the jurisdiction of the municipality, and before any city should ask congress for appropriations to improve the approach of or to protect its entrance, some local inclination ought to be evinced to better the conditions of the port from a municipal standpoint, and in fact it would be a wise departure for any port to vie with the federal authorities in the general trend of improvements, as, if it could be shown that the city took more care of its commerce and navigational facilities than the general government were disposed to do at the entrance of the same and up to the harbor limits the most telling sort of an argument would thereby be advanced when an appropriation was recommended by the district officers in charge of the conservancy and improvement of rivers and harbors. In speaking on this subject Mr. Hermann stated that "the appropriation now made annually by congress for water improvements are more than double what they were from the time the government was founded up to 1860. Up to that time they amounted to only about $12,000,000. They are now $25,000,000 a year, and of that amount I would guess, about $8,000,000 come to the Great Lakes. Yet the government should make generous appropriations for this purpose, for the Great Lakes have established and built up the commerce of the nation." Granted that such are the facts, does it not seem a suicidal policy for our principal ports to almost ignore their water frontage? Means are ordinarily found for beautifying and making permanent improvements around a city, parks are laid out, large municipal buildings are erected and the general outlay required to keep the wheels of the municipal machinery running in good order is always found, why not then permit a fair proportion of the city's expenditure to be placed where it would greatly facilitate the general commerce of the port, enhance the value of real estate and redound to the ultimate good of all her citizens by encouraging manufactures and the transportation of products by water to other points.

PRICE OF STEEL TO ADVANCE.

The Bulletin of the American Iron and Steel Association, the organ of the iron and steel manufacturers of this country, says that an advance will soon be made in the price of steel rails. Notwithstanding the fact that in 1894 there was a great decline in the price of all other

kinds of iron and steel Bessemer steel rails of standard weights remained at $24 a ton throughout the entire year. In January of the present year the price of rails was reduced $2 per ton, or from $24 to $22, and the latter figure has since ruled. The old price of $24, however, in all probability will be restored at an early day.

RELATIVE to the new "rules of the road" known as the White bill, which went into effect this spring on the lakes, it was thought advisable to have the Canadian government adopt the same rules, so that all lake tonnage would sail under the same steering laws. The question was brought before the Dominion legislature this week and the government was asked whether they had decided to pass the law and thus make uniform rules governing ships of both nations. Mr. Costigan, Minisier of Marine, answered that the Canadian government saw no reason for changing the present law and he further pointed out that it would be inexpedient to adopt one set of rules for local waters and another for the Great Lakes.

OPENING OF THE CANADIAN ST. MARY'S FALLS CANAL.

There is to be quite a demonstration at Ste Marie today on the official opening of the Canadian St Mary's Falls Canal.

With the final completion of the ship canal and lock, which cost about $4,000,000, the Canadians have now a continuous waterway 2,384 miles long, from the head of Lake Superior to the Atlantic coast.

As early as 1798 a canal and lock were built at this point by one of the northwest fur companies, subsequently transferred to the Hudson Bay Co. The canal was constructed across the St. Mary's Island, near the site at the present canal. As near as can be ascertained this canal was 300 feet long and 45 feet wide. The lock is said to have been of wood, 38 feet long and 9 feet wide, and capable of raising the water nine feet or about half the total fall of the rapids. The remaining height must have been overcome against the current, which was an easy task for the light bateaux of the traders. The lower gates were raised by the aid of a windlass, and the upper gates folded, and were provided with valves for the admission of water into the lock chamber. This canal was completed in 1808. During the war of 1812 a body of 150 Americans under Major Holmes went over the river, pillaged the adjoining post and destroyed the lock. Timbers of the old canal were unearthed in 1889, when excavations were made for the water power canal, north of the present ship canal.

Work on the new ship canal lock has continued for several years, the plans having been altered to suit the largest class of tonnage. The lock is 900 by 60 feet, with a depth of water over the mitre sill of 20 feet 3 inches. There is also a power canal 1800 feet long, 14 feet deep, and from 100 to 150 feet wide, capable of furnishing 15,000 h. p. at an initial cost of $25 per horse-power.

Work on the canal and lock was begun in May, 1889. The site of the canal is through a neck of land jutting out from the mainland. Its length across the land is 3,500 feet, and including the dredged approaches under water it is 18,100 feet long. There are five sets of lock gates, built of wood. Water is admitted to the chamber by fly valves under the gates, through 8x8 feet culverts, extending the length of the chamber, and having 152 openings at their tops. The gates and valves are operated by electricity, which is generated by water power. Two 45-inch, 150 horse-power turbines, supply the power for operating the generator and dynamos. These turbines are set horizontally and are supplied with water from the upper level by a 6-foot 8-inch steel pipe placed at the back of the lock wall. Just before entering the power house this pipe divides into two five-foot pipes, one for each turbine. The discharge pipes are also of the latter size. The turbines are located on the first floor of the power house, which is a two-story building of stone. Usually only one of them will be used for running the generator. When by reason of any accident it may become necessary to pump out the lock chamber, the two can be used to operate the two centrifugal pumps which have a capacity of 32,000 gallons per minute. The chamber can be pumped dry in six or seven hours. The electric machines consist of two dynamos for electric lighting purposes, and a generator which supplies power to the 22-horse-power motors that operate the gates and the valves. The generators are of 45 K. W. capacity. In all there are six gate machines, one for each leaf of the upper lock gate, lower lock gate and auxiliary gate. A wooden motor house covers each of the gate machines and its connecting motor. So far as is known this canal has the only electric power machinery ever used in operating the gates and valves of canal locks.

LAKE FREIGHTS.

While the Escanaba ore rate wavered during the past week and declined 5 cents, and the 75 cent Marquette rate was none too firm, yet the general outlook is perhaps better than at any time during the season. The reason for this lies in the fact that lively coal shipments must shortly take place, and already the Buffalo rate to Lake Michigan has gone up to 50 cents Chicago, 40 to 45 cents Milwaukee, and it is reported that before the season is over 70 cents will be paid to Chicago, but of course this is only a surmise and looking too far into the future to be of any value. Ohio ports to the head of the lakes is quoted at 30 cents.

The Chicago grain trade has been more than slow all week and it has been uphill work for even the line boats to get what they wanted. The latest charters are at 1⅛ cents corn to Buffalo, with little shipping even at that figure, for Toledo 1½ cents on wheat has been paid.

Some statistics of the ore movement so far this season bear out the assumption that 1895 will show an improvement over the previous year in the volume of shipments, and this will tend to hold up freights. The receipts of ore at the principal Lake Erie ports for 1894, as shown by custom house figures, amounted to 4,902,474 tons, distributed nearly as follows: Cleveland, 1,799,874 tons; Ashtabula, 2,022,510 tons; Conneaut, 243,361 tons; Fairport, 684,722 tons; Lorain 152,034 tons. For May, 1895, the ore received at these same ports amounted to 779.939 tons, distributed as follows; Cleveland, 270,217 tons; Ashtabula, 338,840 tons; Conneaut, 27,338 tons; Fairport, 126,261 tons; Lorain, 17,279 tons.

THE NICARAGUA CANAL.

A favorable report from the Government commission which went to Nicaragua a month ago to examine the route of the proposed Maritime Canal is confidently expected on their return to the United States next month. Private letters received from members state that the commissioners have already traversed the route from Greytown to Brito, and that they are convinced from a cursory examination that the plan of the canal is a feasible one. The commission is now preparing to make a second and more careful survey of the route. The Congressional friends of the canal are awaiting with much interest the report of the commission. If it shall be favorable, as now seems probable, it will greatly aid the passage of a bill looking to the building of the canal by the United States Government. An unfavorable report, on the other hand, would render practically impossible the passage of such a measure.

A NOVEL BICYCLE BOAT.

An ingenious method of traveling over smooth or protected waters has just been perfected at Racine, Wis.

The apparatus, which has been invented by Mr. John Dean of that city, is briefly, a bicycle mounted on two light rubber cylinders or tubes. From recent public tests it has been found to work easy, steer well and impossible to capsize. It appears that two types of these boats will be manufactured for small lake and river use. The portable boats consist of two floats, which are made of light canvas, rubber covered. Each float has two inner tubes, similar to those used in an ordinary bicycle tire. Each tube when inflated is 7 inches in diameter and 10 feet long and are blown up without the use of a pump, making an air chamber 7 inches in diameter and 40 feet long which is sufficient to carry a number of persons. Each float has a truss made of steel tubing, running the full length, which makes it very strong and light and also serves to take the wear of the rubber casings when the boat is run on the beach. The floats are set four feet apart from center to center, making a boat 10 feet long and 5 feet wide. It is connected by steel tubing, one at each end, one for the front wheel to rest on and the main frame into which the rear wheel of the bicycle rests. This frame has two upright pieces with an adjustment to suit any sized wheel. The bicycle is supported from the center of the wheel or steps, for the only change that is made in an rdinary bicycle is to put on an extra step, which is very light. The rear wheel of the bicycle rests on a friction pulley to which is connected a small bevel gear, which works the propeller. There is a rod with an attachment connected to the top of the bicycle frame, so that the rider has full control of the propeller and can raise or lower it to suit the depth of water. The boat when complete draws but 2½ to 3 inches of water. The longest piece in the boat is 3 feet 3 inches and all parts fold up into a very small package weighing about twenty-five pounds. For fishing or hunting the bicycle propeller boat is perfect for it gives the rider the use of both hands. It can attain a speed of from four to five miles per hour with ease with the portable boat and a very much greater speed with the stationary boat which will be made of all steel. All of the running gear is fitted with ball bearings.

'LONGSHOREMEN'S NATIONAL CONVENTION.

The national convention of the 'Longshoremen's Association of the United States will be held at Milwaukee, beginning July 9. The sessions will be held at Lumber Vessel Unloader's hall, 170 Reed street, and will continue five days. It is expected that not fewer than 60 delegates will attend.

The association is affilliated with the American Federation of Labor and has its strongest foothold on the lakes, but steps are being taken to strengthen the organization on the Atlantic and Pacific coasts, and on the gulf. There are now 41 local organizations. The national association was instituted at Detroit, August 26, 1892, by representatives from the lake cities. The present national officers are: General president, Daniel Keefe, No. 3029 Lowe avenue, Chicago; firs vice-president, Charles Kelley, Washburn, Wis.; second vice-president, Frank J. Weber, No. 966 Tenth street, Milwaukee; third vice-president, James Carson, No. 1421 Pine Grove avenue, Port Huron; general secretary treasurer, Henry C. Barter, No. 24 St. Aubin avenue, Detroit.

The principal aims and purposes of the association are to improve the moral, intellectual and social condition of its members, to encourage useful industry, and to render mutual assistance.

CANADIAN NOTES.

At Barrie the steamer Orillia is being lengthened 35 feet.

The steamer Carmona, of the Brown Line, which will run between Windsor and the Sault, is having her guards removed so she can come up through the Welland Canal. Vesselmen will remember her as the Manitoba, of the Beatty Line, running between Sarnia and Duluth. In November, 1883, she went ashore near Southampton in a terrific northeast gale. She spent the entire winter in the ice there, and was afterwards re-built at Detroit and taken to the St. Lawrence River.

A resolution has been introduced into the Canadian parliament calling the attention of that body to the construction of the Chicago drainage canal to the Mississippi, and asking if the government proposes to protect the interests of the Canadian lake marine in the matter.

FLOTSAM, JETSAM AND LAGAN.

George Curtis, engineer on the steamer Norman when she was lost, has been given a place on the City of Toledo.

The municipality of Toledo, after securing 9 Federal government approval of plans for a bridge, reduced the height from 38 to 18 feet. Government engineers have directed the city not to proceed with the bridge on the new plan.

The Big Four railroad has contracted with Carkin & Stickney to dredge the slips around their Sandusky docks. The work will begin at once.

Capt. B. F. Williams, formerly of the American Eagle, is now sailiug the City of Nicollet.

The steamer Frank E. Kirby has been fitted with a powerful searchlight by Hiram Marks of Detroit.

George Allen, late second engineer on the Norman, has been appointed to a similar position on the Sitka.

Capt. Alex McDougall, manager of the American Steel Barge Co., says that the company has during the 4½ years of its existence turned out more tonnage than any other shipyard in America. The company has built 32 boats, including one tug and Standard Co. oil vessels. Twenty-eight were whalebacks with a carrying capacity of 75,000 tons through the Sault at an average depth of water.

DEPTH OF WATER AT LAKE PORTS.

(CONTINUED FROM LAST ISSUE.)

LAKE HURON.

Au Sable, Mich.—Channel 10 feet deep, 120 feet wide, dredged in 1889, up to the swing bridge; present depths can not be given as there has been no survey since, supposed to have shoaled.

Cheboygan Harbor, Mich.—Former channel 15 feet deep, available depth now 13 feet.

Lake Huron (foot of), Jan., 1895.—Seventeen feet at ordinary stage of water. The new 21-foot channel can now be used.

Saginaw River, Mich.—Depth 14 feet, 200 feet wide. On account of low stage of water it is not safe for vessels drawing over 13 feet, which draft may be carried between the mouth of the river and the Portsmouth bridge at S. Bay City, a distance of six miles; thence to the head of navigation 11 feet depth.

Sand Beach, Mich.—Dredged to 21 feet below zero guage, but with prevailing stage of water the entrance depth is not over 20 feet, equal or greater depths adjoins the main breakwater, inside, at all points between these two entrances. There is 13 feet at landing pier, present stage of water.

Sebewaing Harbor, Mich.—In 1881 from bridge to 6-foot curve in Saginaw Bay 7 feet, present depth 4 feet and less.

Thunder Bay Harbor, Jan., 1894.—Dredged to 16 feet, 200 feet wide. Thunder Bay River from mouth to Miners saw mill 16 feet. Present available depth on account of low water and accretions 15 feet.

ST. CLAIR RIVER.

Belle River, Marine City, Jan., 1893.—From mouth to First bridge 13 feet, thence to Broadway bridge 12 feet, available depth at present 11 and 10 feet respectively.

Black River, Port Huron.—Dredged channel 16 feet from St. Clair River to Washington Avenue, Port Huron. Available depth at present is a scant 15 feet, diminishing up stream to 10 feet at the upper limits of the improvement.

Pine River, St. Clair, Jan., 1895.—Dredged channel to shipyard 10 feet, thence to Belknap's brickyard original depth, 5 to 8 feet over bars.

St. Clair River, Port Huron.—The bar in the St. Clair River which obstructed the mouth of Black River has been removed to a depth of 16 feet, from the 16-foot curve above to the 16-foot curve below, a width of 650 feet from the wharves of Port Huron.

LAKE ST. CLAIR.

Clinton River, Mich., Jan., 1895.—10 feet deep, 50 feet wide. A channel 8 feet deep was made from the mouth of the village of Mount Clemens 8½ miles by dredging several bars up to Shoemaker's Bend, but the dredged channels are believed to be deteriorating.

Grosse Pointe Channel, Lake St. Clair, Jan., 1894.—Available depth at ordinary stage 16 feet. Work in progress for channel 800 feet wide and 20 feet deep.

St. Clair Flats Canal, Jan., 1895.—Channel 20 feet deep, beginning at deep water of St. Clair River, above the canal, with a bottom width of 650 feet; thence gradually narrowing to the canal carrying the same depth through canal to deep water on Lake St. Clair with a width of 800 feet.

DETROIT RIVER.

Detroit River, bar at mouth, 1894.—Available depth 16 feet at ordinary stage of water. Work in progress for channel through bar 800 feet wide, 21 feet deep.

Limekiln Crossing, Jan., 1894.—Twenty feet deep, 440 feet in width.

Between Ballard's Reef and the Crossing, Jan., 1895.—Available depth at ordinary stage 17 feet. Work in progress for channel 400 feet wide and depth to solid rock.

Rouge River, Mich., Jan., 1894.—Dredged channel to 16 feet, 240 feet wide, narrowing to 100 feet. The channel has probably shoaled, but to what extent is not known. A project for further improvements is under consideration.

LAKE ERIE AND NIAGARA RIVER.

Ashtabula, O., Oct., 1894.—Depth outside piers 17 to 21 feet, 213 feet wide between piers, 17 feet to bridge, 50 to 75 feet wide on sides of channel, shoaling to 14 feet. Shifting sands cause these soundings to vary from time to time.

Black River, O., June, 1893.—Fourteen-foot bar formed on line of east pier 500 feet into the lake, extending half-way across entrance; 17 feet depth on west half of entrance; 16 to 18 feet between piers. Shifting sands cause depths to vary.

Buffalo Harbor, Jan., 1894.—Outer harbor not less than 23 feet. The river and canal is maintained by the city on the basis of 18 feet depth at low water, city datum, which would give about 19 feet at mean lake level. Actual depth allows about 16 feet draft.

Cleveland.—Between piers generally a 17-foot channel, 50 to 100 feet wide, shoaling on sides to 14 or 15 feet. Entrance to west anchorage basin dredged in 1893, to a depth of 19 feet for a width of 600 feet. Deposit from river and lake causes depths to vary from time to time.

Conneaut, O., Jan., 1893.—Entrance dredged to 17 feet by railroad company. Shifting sands cause depths to vary, but no decided bar has yet formed.

Dunkirk, N. Y., Jan., 1895.—Channel dredged last spring to 13 feet to dock fronts.

Erie, Pa.—There is not less than 17 feet at mean lake level for a width of 250 feet.

Fairport, O., Nov., 1894.—A dangerous bar works across the mouth of piers from the westward, showing soundings of sometimes less than 13 feet. A channel was dredged through this bar in Oct., 1894; otherwise 18 to 22 feet on outer bar is usually found 1,000 to 1,500 feet outside of piers, with sometimes dangerous depths. Usually 17 feet in channel between piers.

Horseshoe Reef, Niagara River.—Depth 18 feet for a width of 400 feet. Some loose rock will be removed from the west side this season.

Huron, O., July, 1893.—Good 17 feet depth full width outside of and between piers. Shifting sands sometimes cause depths to vary, but no decided bar is usually found.

Monroe, Mich.—Minimum depth from lake to ends of piers on line of north pier 8 to 9 feet. Bar makes up from southward with 7 feet depth. Deep waters in canals; 8 to 9 feet in river to docks. These depths vary but little from year to year.

Niagara River, Jan., 1895.—Strawberry Reef 16 feet deep for a width of 400 feet will be deepened to 18 feet for a part of its width this season.

Port Clinton, O.—Dredged channel and to inner harbor 10 feet, 100 feet wide, depths hold fairly well from year to year. There is a pile of stone with 6 feet of water, 1,400 feet outside of piers on range of end of west pier, old light-house has been removed.

Sandusky, O., Jan., 1895.—Depth over bar varies from 15 to 18 feet. 75 to 200 feet in width. Old channel to wharves 13 to 16 feet deep. New straight channel from Cedar Point to B. & O. R. R. wharves has been completed, 200 feet wide, 17 feet deep, present depth less than 17 feet in some places. Dock channel is being dredged to 17 feet.

Sandusky River, Nov., 1893.—A ten-foot channel from bay to deep water in river 6,000 feet in length and 50 to 75 feet wide. Least depth from Sandusky Bay to Fremont 9 feet. Through Sandusky Bay to L. S. & M. S. bridge is 8½ feet.

Toledo, O.—Depth in old channel 11 to 16 feet. This channel will not be lighted or buoyed in 1895. New straight channel 17 feet, 200 feet wide, except near mouth of river, where it shoals at sides to 13 or 14 feet. this will be dredged this season to a full 17 feet. A new pair of range lights are shown on axis of straight channel this year located at Manhatten. Depth in river 18 feet and over, bar at crossing above Craig's shipyard dredged in 1894. Shoal above Cherry street bridge wil also be dredged this season to 18 feet.

Tonawanda Harbor, N. Y.—There is 16 feet between the island and main shore, except within 50 feet of the dock fronts. Shoal spots will be dredged this season.

Vermillion, O.—Piers 130 feet wide, depth 11 to 12 feet, no marked bar, depth increases gradually into the lake.

LAKE ONTARIO.

Charlotte, N. Y., in 1892.—Dredged to 16 feet at extreme low water level, in 1894 silted up to 13.5 feet and it was again dredged to 16 feet. The lake outside piers is 14 feet at extreme low water. Improvements are projected.

Great Sodus Bay, N. Y.—In 1892-3, 13.5 at extreme low water, shoaled since to 12.5 feet and 100 feet wide. It is proposed to deepen to 16 feet and widen to 150 feet.

Little Sodus Bay, N. Y.—In 1893 improved to a least depth of 14 feet at low water level, 40 feet wide. It is proposed to dredge the entire channel to 16 feet at extreme low water.

Oak Orchard, N. Y.—Channel in 1891 13.5 feet deep at mean lake level between the piers, except within 10 feet of the piers.

Olcott, N. Y., 1891.—Channel 13.5 feet deep between the piers, except 10 feet from the piers.

Oswego, N. Y.—Outer harbor 18 feet at low water. Inner harbor deepened to 15 feet the full width of the river. The largest steamers can freely make the elevator and coal trestles.

Pultneyville, N. Y.—Channel and Creek basin deepened up to wharves and warehouses in 1893 to 10 feet at extreme low water level. This channel has since shoaled to 6 feet at the creek outlet.

Sackett's Harbor, N. Y., Feb. 1, 1895.—Dredged to a depth of 12 feet for an area of 6 acres.

Wilson Harbor, N. Y, July, 1889.—Depth of channel 12 feet for 100 feet width near the west pier, except rock bar across mouth with only 9.5 feet.

ST. LAWRENCE RIVER.

Ogdensburg, N. Y.—Present condition 14.5 feet through upper entrance and to all parts of harbor except the middle of the Oswegatchie; 16.5 feet through lower entrance to elevator and coal derrick. In the Oswegatchie, the channels are 60 feet wide; in the St. Lawrence they are from 100 to 250. The upper entrance will be carried out to the river at 16.5 feet this season.

St. Lawrence River, above Ogdensburg, vicinity of Chippewa Bay.—The Upper or Haskell shoal and the spur making out from it as well as Blind Bay shoal have been deepened to 18 feet. Fifteen shoals recently located within 1,000 feet of the mid-channel line are on the latest prints of the charts, several of which will be deepened to 18 feet this season.

DREDGING AT ASHTABULA.

On account of numerous complaints having been made by vessel owners and masters at the delay of the dredging contractors in carrying out their contract to deepen Ashtabula Harbor it is now learned that dredging has begun this week. The harbor is reported as being in some places only fifteen feet in depth and it will be deepened to twenty feet. The sand will first be removed, then the rock bottom cut away till a proper depth is attained. The dredging will extend a distance of 1,800 feet from the old shore line at the river's mouth, and the channel cut will be 210 feet in width. It will take a year to complete the work as projected. The entrance to the port and the river is, however, liable to shoal and more or less dredging will be required at regular intervals to keep a fair draught of water for the large tonnage frequenting Ashtabula.

AMPLITUDES.

The following approximate amplitudes of the Sun's rising will be given each week in this column during the season of navigation. A second bearing of the sun may be taken at sunset by reversing the bearings to read west instead of east, as, for example, N. E. by E. for a sunrise bearing would read N. W. by W. for a sunset, or E. 30° N. to W. 30° N.

LAKE ERIE AND S. END LAKE MICHIGAN, LAT. 42° N.

Sunrise.	Bearing (degrees).	Bearing (points).
June 14	E. 32° N.	NE. by E. ⅛ E.
June 21	E. 32° N.	NE. by E. ⅛ E.

LAKE ONTARIO, S. END HURON AND CENTER LAKE MICHIGAN, LAT. 44° N.

Sunrise.	Bearing (degrees).	Bearing (points).
June 14	E. 33° N.	NE. by E. ⅛ E.
June 21	E. 33° N.	NE. by E. ⅛ E.

N. END LAKES HURON AND MICHIGAN, LAT. 46° N.

Sunrise.	Bearing (degrees).	Bearing (points).
June 14	E. 34° N.	NE. by E.
June 21	E. 34° N.	NE. by E.

LAKE SUPERIOR, LAT. 48° N.

Sunrise.	Bearing (degrees).	Bearing (points).
June 14	E. 36° N.	NE. ⅞ E.
June 21	E. 36° N.	NE. ⅞ E.

With a compass correct magnetic, the difference between the observed and true bearing will be the variation for the locality. If there is any deviation on the course the vessel is heading at the time of taking the bearing, the result after the variation is applied will be the amount of deviation on that course.

BOY'S COMPOSITION ON SAILORS.

The following is declared to be the work of a pupil in an English elementary school: "Seamen are what we call sailors, and captains, and training ship boys. The sailors you see in the streets are nice little fat men, with red and brown faces. They ware boys' coats and hats, and their trousers are too tite for them up above and too wide for them down below. It makes them feel very riled. Sailors don't ware colars, becose their necks are so thick; and they always have their boots blacked for fear the captain might see them round a corner. They don't carry their best close in boxes, but they ty them up in big red and blue handkerchiefs, just like Christmas puddens. Sailors are very fond of their mothers and sisters, and you neerly always see them taking them out to walk. The reason sailors like to get drunk is becose it makes them roll about like as if they were on the ocheant.

NOTES.

THE Union Steamboat Co., of Buffalo owners of the steamer New York, are dissatisfied with the last decision of Judge Swan of Detroit in which he reversed his former ruling and declared the New York wholly to blame for the sinking of the Conemaugh and assessing the damages accordingly. H. C. Wisner, attorney for the New York has applied to the court for a rehearing. Mr. Wisner claims he has evidence of importance bearing upon the conduct of the New York at the time of the collision, that did not appear in either of the former trials. Judge Swan is considering the matter.

ONE of the strangest coffins ever told of, says the *Army and Navy Journal*, is that for which the British War Department is said to be responsible. The story is that a workman, engaged in casting metal for the manufacture of ordnance at the Woolwich Arsenal, lost his balance and fell into a caldron containing 12 tons of molten steel. The metal was at white heat, and the man was utterly consumed in less time than it takes to tell of it. The War Department authorities held a conference and decided not to profane the dead by using the metal in the manufacture of ordnance, and that mass of metal was actually buried and a Church of England clergyman read the services for the dead over it.

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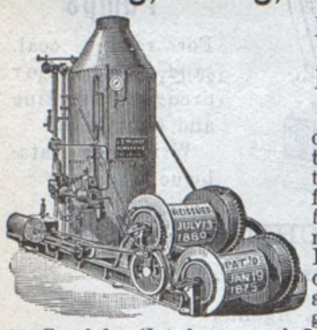

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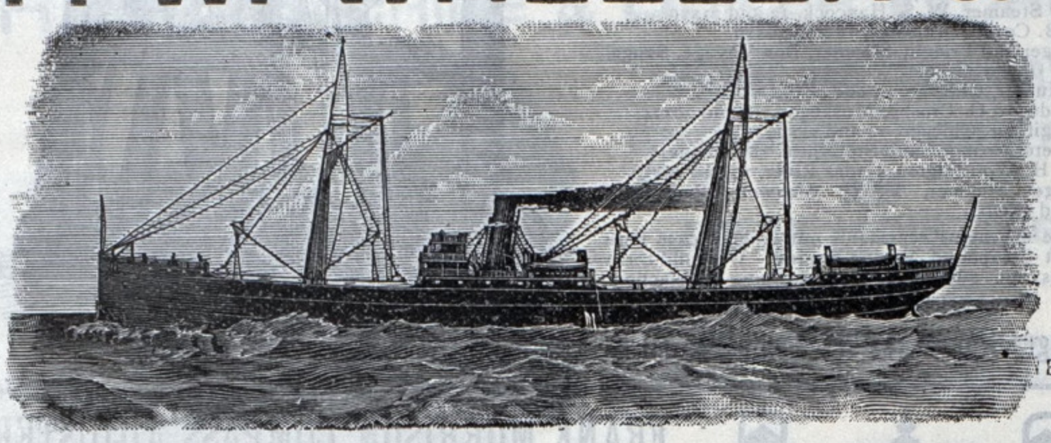

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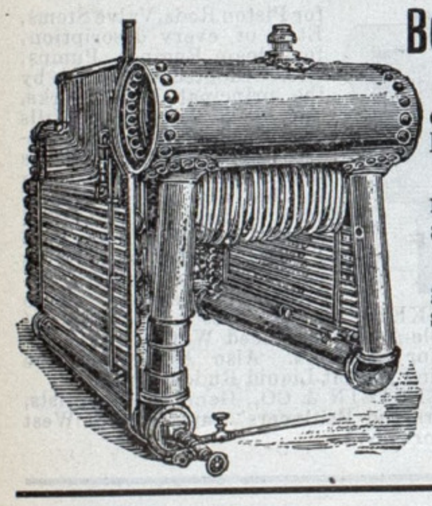

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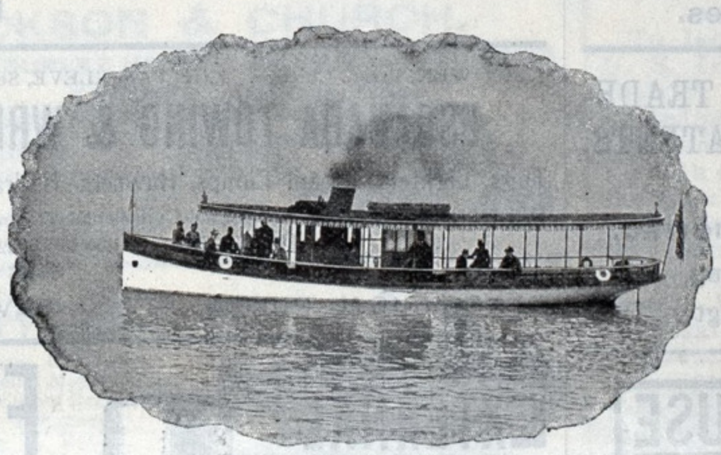

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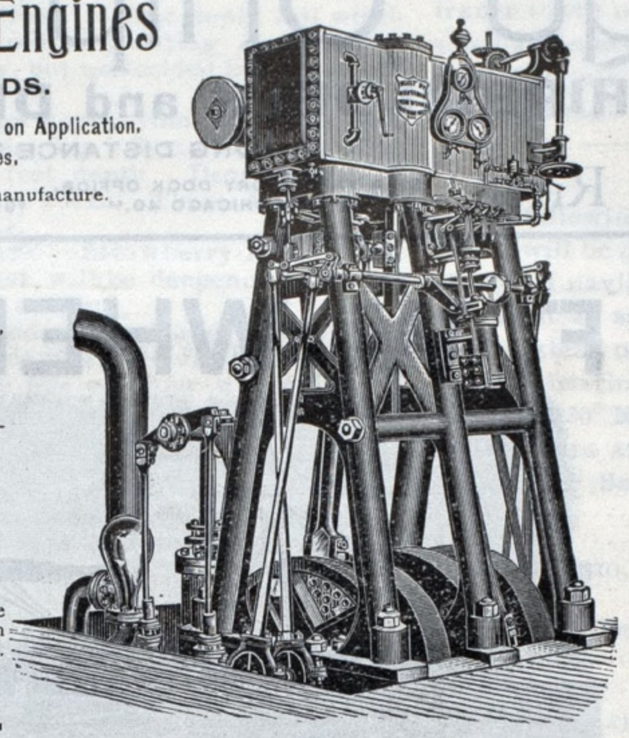

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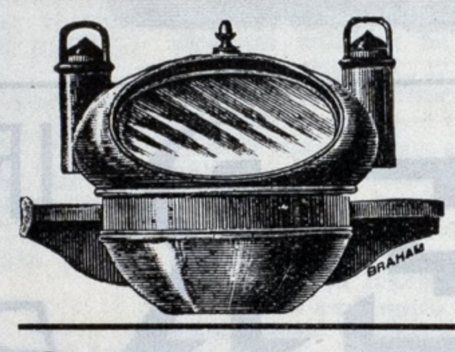

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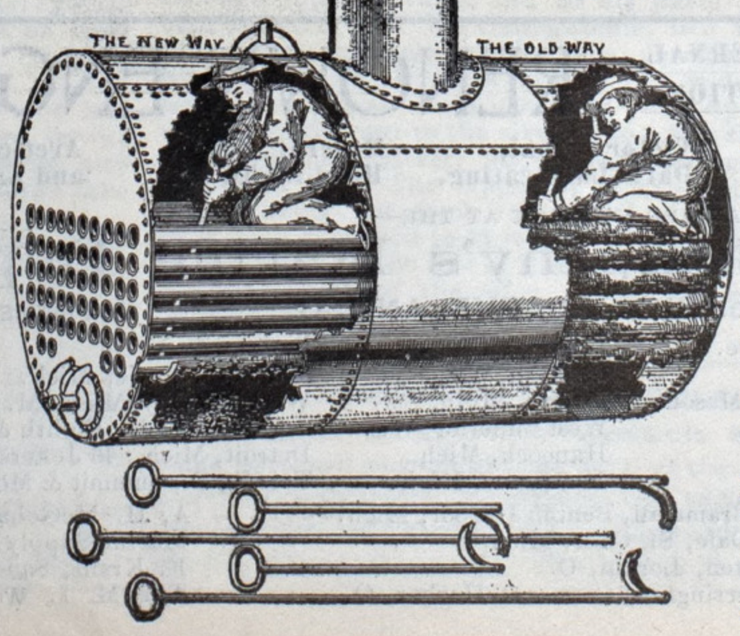

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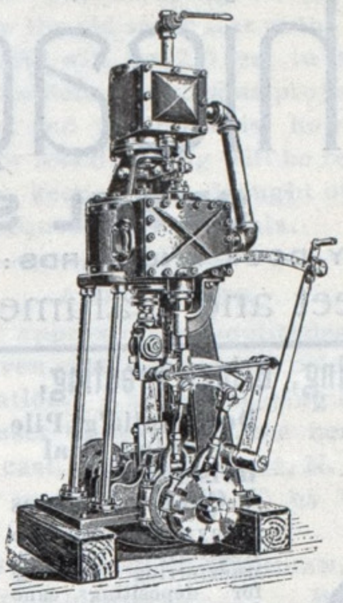

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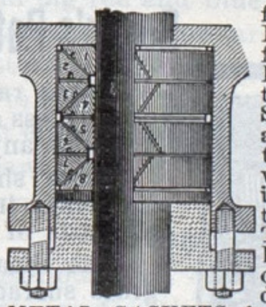

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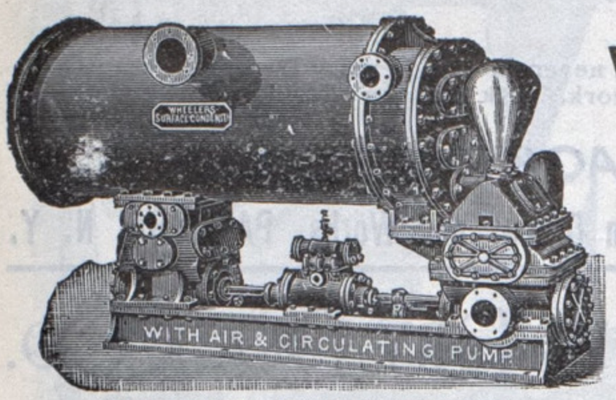

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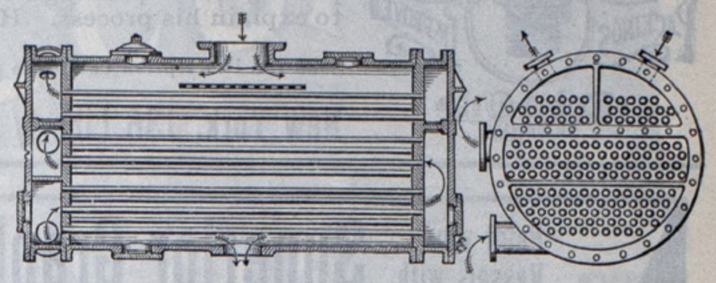

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PROPOSALS.

TREASURY DEPARTMENT, Washington, D. C., May, 27, 1895. Sealed proposals are hereby invited and will be received at this Department until 2 o'clock P. M., on Thursday, June 20th, 1895, at which time and place they will be opened in the presence of attending bidders, for the construction by contract of one steel steam propeller for the Revenue Cutter Service of the United States, for service on the Great Lakes, to be known while in course of construction or until launched, as "No. 1, R. C. S." The limit of the appropriation for the construction and completion of this vessel is $175,000, Said vessel is to be constructed in accordance with plans and specifications provided by the Secretary of the Treasury. Plans and specifications for the construction of said vessel may be seen and examined at this Department at any time after the 1st day of June 1895, and blue prints will be furnished to bidders upon application to this Department at any time after that date, and printed specifications a few days later. Instructions to bidders and contractors, forms of proposals and contract, bond and bondsmen's oath, may be obtained at any time after June 1st, 1895, on application to the Division of Revenue Cutter Service, Treasury Department, where all information essential to bidders can also be obtained. Proposals for construction of said vessel will be considered only from such ship-builders as can show to the satisfaction of the Secretary of the Tressury that they are possessed of the necessary plant and facilities for the performance of the work. Evidence as to this ability must be submitted to the Department at time of filing the proposal or not later than 2 P. M., June 20th, 1895. Each proposal must include the construction of both the vessel and her machinery, complete in all respects as required by the plans and specifications. The said vessel must be completed and delivered at some Port on Lake Michigan that may be designated by the Secretary of the Treasury on or before July 1, 1896, and bidders are informed that because of the urgent need of speedy delivery of said ship, the element of time to be consumed in the construction of said vessel will be given due consideration in determining the award of the contract. Each proposal must be accompanied with a cash deposit or certified check payable to the order of the Secretary of the Treasury in the sum of $5,000.00, which shall become the property of the United States, in case the successful bidder shall fail to enter into the requisite contract and furnish the requisite security on the acceptance of his proposal. Bids must be addressed to the Secretary of the Treasury, and be endorsed on the envelope "Proposal for building a steam revenue vessel for the Great Lakes." The right is reserved to reject any or all bids, and to waive defects if deemed for the interests of the Government so to do. S. WIKE, Acting Secretary.

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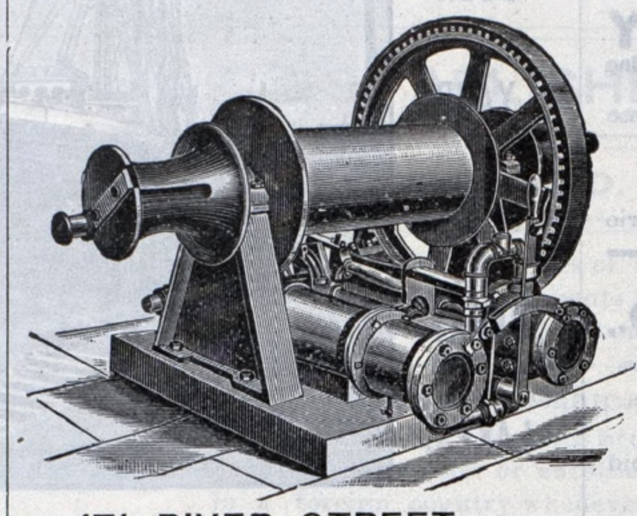

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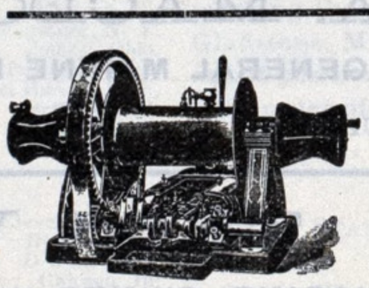

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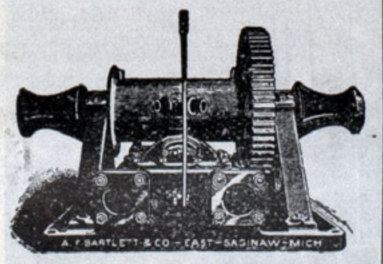

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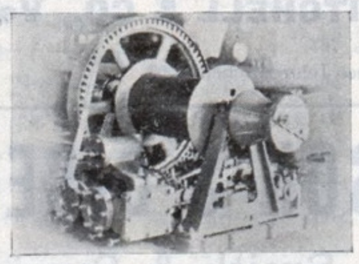

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PROPOSALS.

TREASURY DEPARTMENT. Washington, D. C., June 6, 1895. The time named in Department advertisements of May 27, 1895, for receiving proposals for the construction of two steam propellers for the United States Revenue Cutter Service, for the Great Lakes and the New England coast, is hereby extended, and bids for the same will be received at this Department until 2 o'clock p.m., Wednesday, June 26, 1895. S. WIKE, Acting Secretary. 24

TO BUILDERS. Office of Light-House Engineer, Tenth District, Cleveland, O., May 27, 1895. Proposals will be received at this office until 12 o'clock noon, of Thursday, the 13th day of June, 1895, for furnishing the materials and labor of all kinds necessary for the construction of crib and stone foundations for front and rear beacons of Sandusky Bay Range Light Station, Ohio. Plans, specifications, forms of proposal, and other information may be obtained on application to this office. The right is reserved to reject any or all bids, and to waive any defects. JARED A. SMITH, Lieut. Col. Corps of Engineers, U. S. A., Engineer 10th Light-House District. 22–23

TO BUILDERS. Office of Light-House Engineer, Eleventh District, Detroit, Mich., May 31, 1895. Proposals will be received at this office until 3 P. M., of Wednesday, the 26th day of June, 1895, for furnishing the materials and labor of all kinds necessary for the construction, erection and delivery of the Round Island Light Station, Straits of Mackinac, Michigan. Plans, specifications, forms of proposal, and other information may be obtained on application to this office. The right is reserved to reject any or all bids, and to waive any defects. M. B. ADAMS, Major, Corps of Engineers, U. S. A., Light-House Engineer. 23–24

TO IRON MANUFACTURERS. Office of U. S. Light-House Engineer, Eleventh District, Detroit, Mich., May 31, 1895. Sealed proposals will be received at this office until 3 o'clock P. M. of Wednesday, the 26th day of June, 1895, for furnishing the materials and labor of all kinds necessary for the completion and delivery of the metal work for the Round Island Light Station, Straits of Mackinac, Michigan. Plans, specifications, forms of proposal and other information may be obtained on application to this office. The right is reserved to reject any or all bids, and to waive any defects. M. B. ADAMS, Major, Corps of Engineers, U. S. A., Light-House Engineer. 23–24

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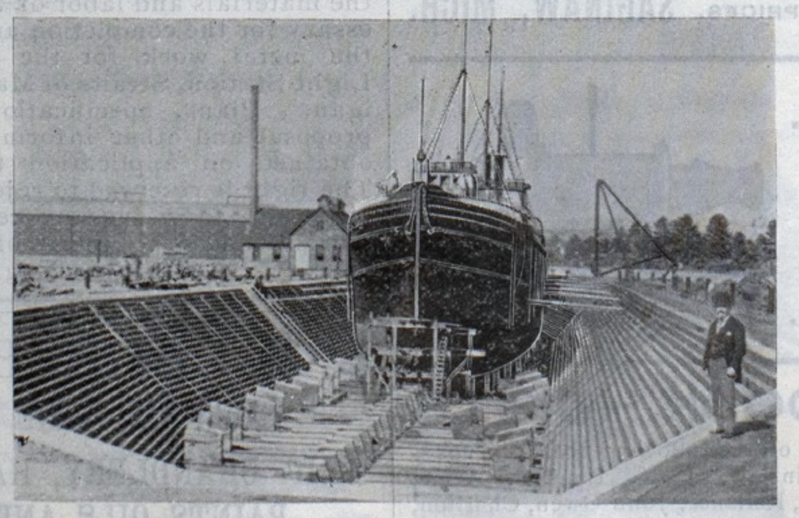

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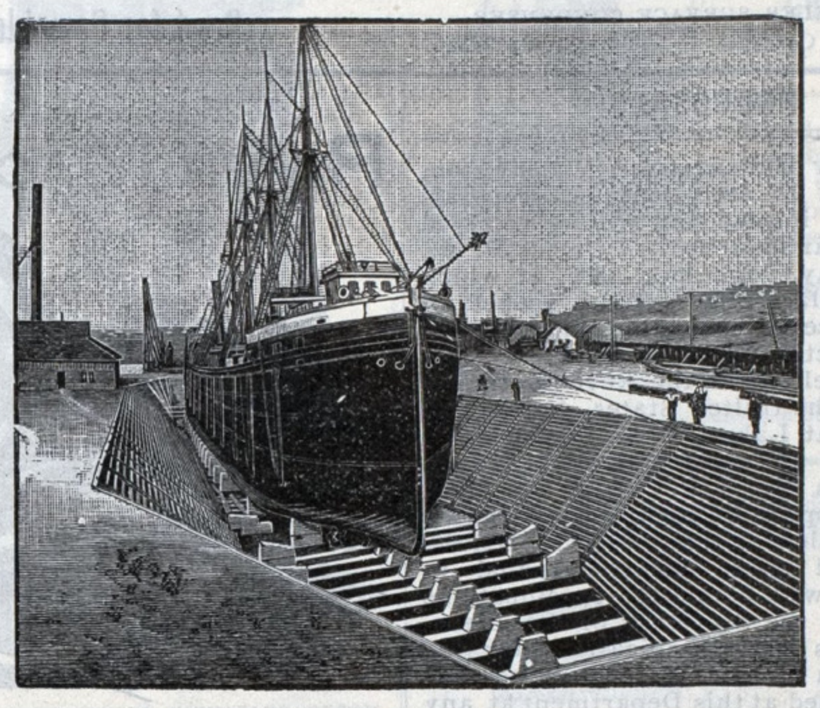

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